
ORIENTED FOR WHOM?

THE IMPACTS OF TOD ON SIX LOS ANGELES
NEIGHBORHOODS

A Comprehensive Project Submitted in Partial Satisfaction of the
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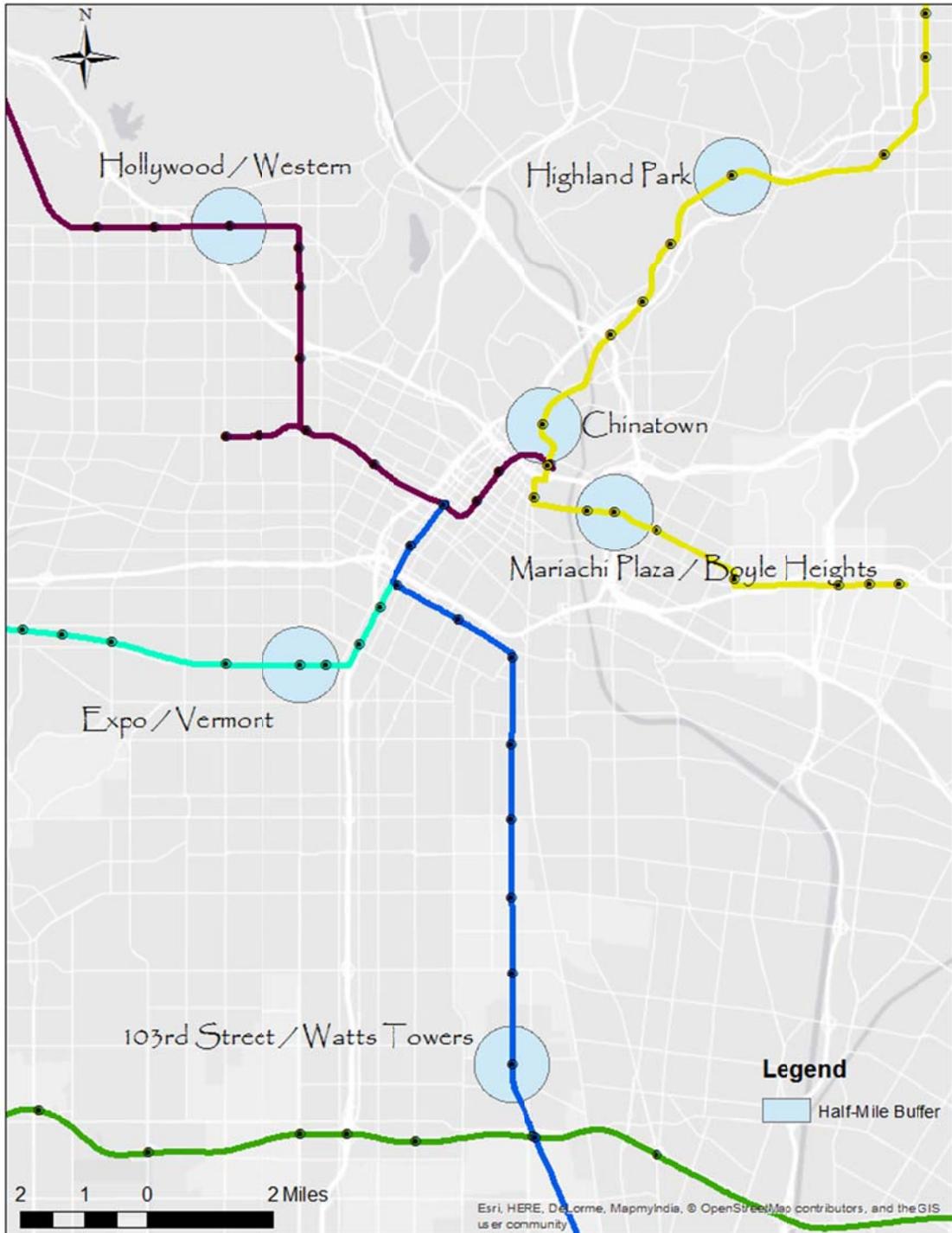
EXECUTIVE SUMMARY

This 2015 Comprehensive Project is part of a wider effort funded by the California Air Resources Board (CARB) to explore the impact of transit-oriented development (TOD) on low-income communities. The project's client is the Thai Community Development Center (Thai CDC). Financial and other support were provided by UCLA's Department of Urban Planning, the California Endowment, the California Community Foundation, UCLA's Center for the Study of Inequality and UCLA's Institute of Transportation Studies.

The project collected primary data in six Los Angeles neighborhoods to develop a grounded understanding of how stakeholders (transit riders, small and ethnic businesses, and community institutions) and the physical environment have experienced neighborhood change. The neighborhoods are diverse in their location around Los Angeles, the duration of time since the Metrorail station opened, and their demographic profiles. All six are disadvantaged communities. The six Metrorail station areas profiled in this study are: 103rd Street/Watts Tower (Blue Line opened 1990), Chinatown (Gold Line opened 2003), Highland Park (Gold Line opened 2003), Hollywood/Western (Red Line opened 1999), Mariachi Plaza (Gold Line opened 2009), and Vermont (Expo Line opened 2012).

Source: Created by Rosalie S. Ray for this project.

The analyses of TOD impacts are organized in four chapters, each with a specific



focus and unique methodological approach. Chapter 2 presents the survey results of over 600 rail users. The responses were categorized to identify those living near the transit station and those living in other neighborhoods. The data show that 35 percent of those surveyed were local TOD residents. About half of all riders were low-income, on average have used Metro rail for at least five years, and primarily used rail to commute to work. Survey data also revealed disparities in rail transit usage and accessibility and proximity of the station to buses, employment, businesses, and housing. From the findings, three strategies were developed to advance equitable development near rail stations. First, the City of Los Angeles should develop plans near transit stations to encourage new housing and preserve existing low-cost housing. Second, the City of Los Angeles should incentivize employers to implement public transit subsidy programs for workers who commute by transit. Third, Metro should expand its public-private partnerships with community-based organizations (CBOs) or nonprofits to implement fare assistance programs to serve low-income clients.

Chapter 3 examines TOD impacts through the lens of *third places*— public spaces with a retail and social component as represented by local coffee and donut shops. The one primary research question is: How does rail transit affect the commercial sector? Data and information were collected through customer surveys, an observational exercise, and a business owner survey. The multi-pronged approach contributes to a holistic understanding of the third place sector. The analysis indicates that retail establishments in the case-study neighborhoods are diverse, with some targeting either a high-income or low-income clientele, or a mix of both. A comparison of the characteristics of new and longer-term residents near rail transit shows the two groups

have different demographics. Established residents are older, predominately Latino, and more likely to shop locally. Conversely, new residents are typically younger, more likely to be non-Hispanic White or Asian, and are less likely to shop locally. The findings indicate a need for holistic community development that is inclusive of the commercial sector, the context of the commercial district, and the value of community-serving retail. Specifically, community developers should: recognize the commercial sector as an important aspect of neighborhood change; acknowledge and preserve the diversity of TOD commercial districts; and protect community-serving retail.

Chapter 4 presents the results of systematic visual observations of the built environment in the six case study neighborhoods, focusing on indicators of physical and social change that are often assumed to go hand-in-hand with residential and commercial gentrification. The research team utilized two observational groundtruthing instruments to catalog overall land uses and infrastructure investments as well the relative quality of those buildings at the street-block (98 blocks) and parcel level (180 parcels). The surveyors assessed observable land uses, visible public infrastructure, types of individuals present, observed social diversity, physical disorder, indicators of ethnic commercial presence, and renovations of property and landscaping. The observations indicate that areas experiencing early stages of gentrification appear differently than areas in late stages of gentrification. The observational results provide nuance and context to quantitative data used in studying neighborhood change. Given the usefulness of this tool to further document the extent of gentrification, the following recommendations are made to aid with identifying areas of inequitable development in the formal planning process. One, stakeholders, such as community groups and city planners, should use

groundtruthing in conjunction with secondary data that may not capture subtle characteristics of gentrification. Two, groundtruthing tools are most useful when they are context-sensitive and developed with inputs from stakeholders that are familiar with a neighborhood and the perceived changes. Three, groundtruthing should be a longitudinal process to allow for comparative analysis based on a benchmark to allow for these changes to be quantified and taken into consideration in promoting equitable neighborhood development.

Chapter 5 examines four questions related to equity in TOD: How has Transit Oriented Development (TOD) impacted the study areas?; How effective have local communities been in controlling the outcomes of TOD?; What is the relationship between CBOs and governmental agencies in the TOD process?; and What more can be done to allow station area residents and community groups to influence the TOD process from conception, design, and realization? Information was collected through 30 interviews with CBOs and public agencies to understand the role that each stakeholder plays in the TOD planning and development process. The questions were structured to elicit information on the challenges, opportunities, and best practices for minimizing the negative externalities of TOD. Analysis of the interviews shows a number of trends. One, new residential and retail developments are emerging, which are serving different populations than previous establishments. Two, CBOs pursue opportunities to make TOD more equitable, but are often limited by restrictions placed by public agencies. Three, public agencies utilize land use planning to encourage TOD, but these plans need to be reevaluated and improved to better meet the needs of the neighborhood. Based on the findings, the following should be implemented to bring equitable TOD to communities in

Los Angeles by promoting collaboration between stakeholders. One, the City of Los Angeles should define characteristics of equitable TOD in order to craft a citywide TOD plan with measurable equity objectives. Two, LA Metro should make equal investments in bus service in TODs with high bus ridership. Three, Los Angeles public agencies should engage more frequently with CBOs outside the public hearing process. Four, established CBOs with research expertise and greater advocacy capacity should share their resources with small CBOs to foster a stronger advocacy platform.

This report provides new insights into the impacts of TODs on disadvantaged neighborhoods. Given the resources and time constraints, the project covers only a few aspects of the phenomenon. Despite these limitations, the project has produced useful information and empirical results that complement other efforts to assess the consequences of TODs. A major cross cutting finding from the project is that the neighborhood changes are complex, occurring over many years and varying across places.

Moreover, there appears to be a need for a well-conceived, better coordinated, and adequately funded collaborative effort to promote equitable development around transit stations. One key element to successful implementation is ongoing and real-time monitoring of changes and performance, while using the findings to make any necessary modifications to policies, plans and programs in order to ensure equitable outcomes. Transit investments are public investments; therefore, there should be a public obligation to ensure that all stakeholders share in the direct and indirect benefits.

CHAPTER 1: INTRODUCTION

As regions across California finalize their first Sustainable Communities Strategies (SCS), communities are increasingly concerned about how new transit investment and related new development around transit stations will affect the lives of existing residents and businesses, particularly in low-income communities of color. Surprisingly little empirical analysis has been conducted about the relationship between transit-oriented development (TOD) and social equity in Los Angeles.¹ This 2015 Comprehensive Project² is part of a wider effort funded by the California Air Resources Board (CARB) to explore the impact of transit-oriented development on low-income communities.³ With funding from the California Endowment and the California Community Foundation, Thai Community Development Center (Thai CDC) served as the client for this project. UCLA's Department of Urban Planning sponsored the course. Additional support came from UCLA's Center for the Study of Inequality and UCLA's Institute of Transportation Studies. The findings help develop a fuller understanding of the nature, magnitude and cause of TOD-related displacement.

¹ For a review of the literature on TODs, gentrification and displacement see Zuk, M., Bierbaum, A., Chapple, K., Gorska, K., Loukaitou-Sideris, A., Ong, P., & Thomas, T. (2014). *Gentrification, Displacement and the Role of Public Investment: A Literature Review*. University of California, Berkeley. Manuscript on file.

² A comprehensive project is a two-quarter planning studio in which students work together to respond to a specific, real-world planning problem. Each project is sponsored by a client organization. Students work with their faculty adviser(s) and the client to establish the scope of work. They then organize themselves to assemble and analyze data, and to develop recommendations—policy and planning proposals, design guidelines etc. —to address the problem.

³ The wider project is titled “Developing a New Methodology for Analyzing Potential Displacement,” and is led by a team of UC Berkeley researchers, and professors Anastasia Loukaitou-Sideris and Paul Ong at UCLA.

Case Study Neighborhoods

As part of this project, students collected primary data in six Los Angeles neighborhoods to arrive at a grounded understanding of how stakeholders (transit riders, small and ethnic businesses, and community institutions) and the physical environment have experienced neighborhood change. The communities were selected in consultation with the Southern California Research Advisory Committee for the wider CARB project and the project client. The neighborhoods are diverse in their location around Los Angeles, the duration of time since the Metrorail station opened, and differ in terms of demographic profiles. All six are disadvantaged communities. The six Metrorail station areas profiled in this study are:

- 103rd Street/Watts Tower (Blue Line),
- Chinatown (Gold Line),
- Highland Park (Gold Line),
- Hollywood/Western (Red Line),
- Mariachi Plaza (Gold Line), and
- Vermont (Expo Line).

All six case study neighborhoods are located in the City of Los Angeles, California (See Figure 1). The Metrorail stations located in each neighborhood opened between 1990 (103rd Street/Watts) and 2012 (Expo/Vermont). The neighborhoods have a median household income below the county average and more than half of the populations in the areas are residents of color.

Figure 1.1: Case Study Neighborhoods



Source: Created by Rosalie S. Ray for this project.

103rd Street/Watts Tower (Blue Line)

Located at the intersection of 103rd St and Grandee Ave, this grade-level station is located in the neighborhood of Watts in South Los Angeles. Given its location in historical South Central Los Angeles, popular media has characterized the area as predominantly Black and associated with poverty; however, as an area in transition, it is now predominantly Latino. The economic distress of the area has increased over the years. Opened in 1990, the station is the oldest of case studies.

Chinatown (Gold Line)

Chinatown Metrorail station is an elevated light rail stop located at North Spring Street and College Street in the Chinatown neighborhood of downtown Los Angeles. The station opened in 2003 as an eastern extension of the Gold Line, which connects Pasadena, Downtown Los Angeles, and East Los Angeles. The Chinatown neighborhood is the result of the construction of the nearby Union Station in the 1930s. It is the single case study with a majority Asian demographic.

Highland Park (Gold Line)

Highland Park is one of Los Angeles' oldest residential neighborhoods, and is often considered one of the city's first suburbs. The area is defined by single-family residential housing. The neighborhood has been predominantly Hispanic or Latino since the 1960s. The Metrorail station opened in 2003 and is at grade.

Hollywood/Western (Red Line)

The Hollywood/Western Metrorail station is located near the intersection of Hollywood Boulevard and Western Boulevard in East Hollywood. The neighborhood is a

densely populated, in moderately diverse area of the city. The neighborhood is notable as the home of ethnic enclaves such as Little Armenia and Thai Town. The area is known for the Barnsdall Art Park, Los Angeles Community College, as one of Los Angeles' largest hospital districts. The area's heavy rail subway station opened in 1999.

Mariachi Plaza (Gold Line)

Boyle Heights is a predominantly Hispanic working class neighborhood, located directly east across the river from downtown Los Angeles. Referred to as the "Ellis Island of the West Coast," the neighborhood has historically been home to minority groups, often the result of spatial and racial segregation. Mariachi Plaza is at the commercial center of this neighborhood and is surrounded by a number of established Mexican restaurants and stores along the First Avenue corridor. Its underground Metrorail station opened in 2009 as part of the Eastside Gold Line subway extension.

Vermont (Expo Line)

The Expo/Vermont Metrorail station is an at-grade light rail stop located in the West Adams neighborhood of Los Angeles. Major destinations near the station include the University of Southern California (USC), Exposition Park, the Natural Museum of History, and the Memorial Coliseum, which hosted the 1932 and 1984 Olympic games. USC has invested in the redevelopment of the area in recent year as University Park and has created several new amenities for its students. Aside from students, Latino renters comprise the majority of the residential demographics.

Report Layout

The analyses of TOD impacts in the six neighborhoods are organized and reported in four chapters. Each chapter has a different focus and unique methodological approach, and includes recommendations based on the empirical findings, along with technical appendices and references:

Chapter 2: Consideration of Transit Riders

Chapter 3: TOD Impacts on Third Places

Chapter 4: Change in the Built Environment

Chapter 5: Fostering Equitable Transit Oriented Development

Consideration of Transit Riders

Metro ridership data provides information about people who *use* public transit, and Census data provide information on the people who live *near* transit; however little is understood about the overlap between these groups. To fill this research gap and understand the extent to which local residents are riding rail transit. Chapter 2 presents the results of almost 700 surveyed rail users. The chapter examines one dimension of social equity and TODs by addressing three primary research questions:

- (1) Who are riders of Metro Rail?
- (2) Why are transit-riders using rail? And,
- (3) Who benefits from TOD investments?

The team used a closed-ended survey to collect data on rider demographics, trip purpose, and participants' average use of Metro. A total of 664 surveys were collected, with more than 100 surveys per station. The responses were weighted to reflect 2014 Metro Ridership patterns, and to account for sampling design and differential response rates. The responses were categorized to identify those living near the transit station and those living in other neighborhoods.

The results show that 35 percent of those surveyed were local TOD residents. About half of all riders were low-income, on average have used Metro rail for at least 5 years, and primarily used rail to commute to work. Survey data also revealed disparities in rail transit usage and accessibility and proximity of the station to buses, employment, businesses, and housing. For example, Hollywood/Western has high ridership and both Chinatown and Expo/Vermont experience low ridership, but all three stations show high ridership among non-local riders. The low volume riders, particularly local riders from Chinatown and Expo/Vermont, indicate that local residents underutilize these stations. Therefore, strategies that increase low-income and local ridership can ensure equitable access to TOD investments.

From the findings, three strategies were developed to advance equitable development near rail stations. These strategies can optimize benefits from TOD investments, increase transit ridership, and reduce or maintain transportation costs for local, low-income transit users:

- (1) The City of Los Angeles should develop plans near transit stations to encourage new housing creation and preserve existing low-cost housing;

- (2) The City of Los Angeles should incentivize employers to implement public transit subsidy programs for workers who commute by transit;
- (3) Metro should expand its public-private partnerships with community-based organizations or nonprofits to implement fare assistance programs to serve low-income clients.

TOD Impacts on Third Places

Chapter 3 examines the impact of TOD through the lens of *third places*— public spaces with a retail and social component. Specifically, this study focuses on local coffee and donut shops. Coffee shops are often viewed as symbols of gentrification, whereas donut shops, which are comparable in function, usually are not. The chapter aims to understand the experience of local businesses by addressing one primary research question:

- (1) How does rail transit affect the retail sector?

The chapter is informed by three complementary field methods: customer surveys, an observational exercise, and a business owner survey. The customer survey aims to identify the demographics of consumers and highlight relationships between individuals' residency, shopping habits, and preferences for third-places. The observational exercise provides a more thorough understanding of the differences between coffee and donut shops by documenting the distinct physical characteristics of each venue. Only one survey of business owners was successfully collected; nonetheless, the instrument sheds light on an owner's perspective and concerns of neighborhood change. While not all three instruments were used at each establishment, at the very least, the three instruments

provided the research team with options for collecting data. The multi-pronged approach contributes to a holistic understanding of the experience of the third place sector.

The complementary data indicates that retail establishments in the case-study neighborhoods are diverse, with some targeting either a high-income or low-income clientele, or a mix of both. A comparison of the characteristics of new and longer-term neighborhood residents near rail transit shows that established residents are older, predominately Latino, and more likely to shop locally. Conversely, new residents are typically younger, more likely to be Non-Hispanic White or Asian, and are less likely to shop locally.

The findings indicate a need for a holistic community development approach that is inclusive of the commercial sector, the context of the commercial district, and the value of community-serving retail. Specifically, community developers should:

- (1) Recognize the commercial sector as an important arena of neighborhood change;
- (2) Acknowledge and preserve the diversity of TOD commercial districts; and
- (3) Prioritize protection of community-serving retail.

Change in the Built Environment

Neighborhood change manifests itself through shifts in the demographic characteristics of residents and the built environment. Temporal research on neighborhood change often relies on quantitative data, but the subtle manifestations of change that alter the look and feel of the built environment often go unrecognized as these qualities are difficult to quantify and track. Chapter 4 presents the results of

systematic visual observations of the built environment in the six case study neighborhoods.

The observations in this research specifically focus on indicators of physical and social change that are often assumed to go hand-in-hand with gentrification. Physical changes that signal gentrification may become noticeable through the construction of new or renovated commercial and residential properties that are visibly distinct from the surrounding area. Social changes may become apparent as the composition of the people who occupy and use these spaces also change. Both social and physical transformations have the potential to significantly alter a neighborhood's character.

The research team developed two observational groundtruthing instruments to catalog overall land uses and infrastructure investments as well the relative quality of those buildings at the street-block and parcel level. The research team collected data for 98 blocks within one-quarter mile of the Metro stations and observed 180 parcels with registered new construction, renovations or sales between 2008 and 2013. The surveyors assessed observable land uses, visible public infrastructure, types of individuals present, observed levels of social diversity, physical disorder, indicators of ethnic commercial presence, and renovations to property and landscaping.

The observations indicate that areas experiencing early stages of gentrification appear differently than areas in late stages of gentrification. Surprisingly, stereotypical indicators of gentrification (such as upscale cafes or yoga studios) were observed infrequently in the neighborhoods where community groups are most concerned about gentrification. However, many more subtle indicators emerged in neighborhoods in early

stages of gentrification, such as minor cosmetic residential renovations and higher-end landscaping. Signs of potential future neighborhood change included the quantity of vacant parcels and the share of parcels that are more visually appealing than the neighborhood average.

The observational results provide nuance and context to quantitative data used in studying neighborhood change. Given the usefulness of this tool to further document the extent of gentrification, the following recommendations are made to aid with identifying areas of inequitable development in the formal planning process:

- (1) Stakeholders, such as community groups and city planners, should use groundtruthing in conjunction with secondary data that may not capture subtle characteristics of gentrification;
- (2) Groundtruthing tools are most useful when they are context-sensitive and developed with inputs from stakeholders that are familiar with a neighborhood and the perceived changes;
- (3) Groundtruthing should be a longitudinal process to allow for comparative analysis based on a benchmark to allow for these changes to be quantified and taken into consideration in promoting equitable neighborhood development.

Fostering Equitable Transit Oriented Development

Investment in Los Angeles' public transit system is at an unprecedented high. Current public policies, plans and expenditures are intended to promote a more transit-oriented future for Los Angeles. Chapter 5 focuses on the consideration of equity as Los

Angeles transforms into a more environmentally and economically sustainable region.

The chapter examines four questions related to equity in TOD:

- (1) How has Transit Oriented Development (TOD) impacted the study areas?
- (2) How effective have local communities been in controlling the outcomes of TOD?
- (3) What is the relationship between CBOs and governmental agencies in the TOD process?
- (4) What more can be done to allow station area residents and community groups to influence the TOD process from conception, design, and realization?

The research team conducted interviews with CBOs and public agencies to understand the role that each stakeholder plays in the TOD planning and development process. A total of 30 interviews were completed in-person or over the phone using a semi structured interview instrument over a period of four months. The questions were structured to elicit information on the challenges, opportunities, and best practices for minimizing the negative externalities of TOD.

Analysis of the interviews shows a number of trends. The first is that new residential and retail developments are emerging and that they are serving different populations than previous establishments. This is a concern because long-term, low-income residents are no longer able to afford the housing, goods, and services available in their neighborhood. The second finding is that CBOs pursue opportunities to make TOD more equitable, but are often limited by restrictions placed by public agencies. Lastly,

public agencies utilize land use planning to encourage TOD, but these plans need to be reevaluated and improved to better meet the needs of the neighborhood.

Based on the findings the following should be implemented to bring equitable TOD to communities in Los Angeles by promoting collaboration between stakeholders:

- (1) The City of Los Angeles should define characteristics of equitable TOD in order to craft a citywide TOD plan with measurable equity objectives;
- (2) LA Metro should make equal investments in bus service in TODs with high bus ridership; and
- (3) Los Angeles public agencies should engage more frequently with CBOs outside the public hearing process.
- (4) Established CBOs with research expertise and greater advocacy capacity should share their resources with small CBOs to foster a stronger advocacy platform.

Concluding Remarks

This report provides new insights into TOD impacts on disadvantaged neighborhoods. Given resources and time constraints, the project covers only a few aspects of the phenomenon. Despite these limitations, the project has produced useful information and empirical results that complement other efforts to assess the consequences of TODs. A major cross cutting finding from the project is that neighborhood changes are complex, occurring over many years and varying across places.

Moreover, there appears to be a need for a well-conceived, better coordinated, and adequately funded collaborative effort to promote equitable development around transit stations. One key element to successful implementation is ongoing and real-time monitoring of changes and performance, while using the findings to make any necessary modifications to policies, plans and programs in order to ensure equitable outcomes. Transit investments are public investments; therefore, there should be a public obligation to ensure that all stakeholders share in the direct and indirect benefits.

CHAPTER 2: CONSIDERATION OF TRANSIT RIDERS

Introduction

This chapter examines transit ridership patterns near six Los Angeles County Metropolitan Authority (Metro) rail stations through transit user surveys (see Appendix 2.1). The survey attempts to answer three questions: (1) Who are riders of Metro rail?; (2) Why are transit riders using rail?; and (3) Who benefits from rail investments? According to surveys conducted with over 600 Metro riders, this study finds that almost half of all rail riders are low-income, about half are commuting to work, and about a third live in a TOD station area. Based on these findings, this chapter recommends three strategies that can assist low-income riders and increase local transit-oriented development (TOD) resident ridership. The strategies include examining new and existing neighborhood plans, incentivizing employers to encourage transit use through subsidy programs, and encouraging Metro to establish more partnerships with community based organizations (CBOs).

Background

The general goal of public transportation is to serve two major purposes: (1) to provide access to those with limited transportation resources, and (2) to serve the common good in terms of the environmental benefits of reducing greenhouse gases (Blumenberg & Ong, 2001). In order to achieve those goals, the two purposes should be addressed so that rail investments are equitably distributed to serve both transit-dependent riders and choice riders in the six case study areas. A transit-dependent rider is generally defined as someone who does not have access to a car for most of their trips

while a choice rider is defined as someone who has access to a car, but chooses to use public transportation for the trip (Lachapelle, 2011). These concepts will play a significant role throughout this chapter.

This chapter uses transit user surveys to identify groups who directly benefit from rail investments. Ridership counts and demographic data can help assess the impacts of rail investments and whether the benefits of TOD are equitably distributed. While demographic data on transit users exists, as demonstrated by existing Metro data (Los Angeles County Metropolitan Transportation Authority, 2014), specific knowledge is lacking on the demographics of TOD residents and their travel behavior (Chapple, 2009). In other words, data exists on the population of riders in general, but there is insufficient information on riders who live near specific transit stations.

The background for this chapter is organized into three sections. The literature review in the first section describes previous research on mass transit related to access and mobility. It discusses Los Angeles' transportation mismatch and how that could be a defining attribute between choice riders and transit-dependent riders. The second section examines the intersection between rail and bus - complementary, yet competitive modes of mass transit. The last section describes survey methods used in previous research relating to transit usage.

Literature Review

The intersection between mobility and access is a complex concept in transportation literature. "Mobility" is defined as the ability to travel quickly, while "access" refers to the ability to reach desired goods, services, activities, and destinations

(Walker, 2011). Access is the ultimate goal of most transportation modes (Litman, 2008). Public transit can improve access in two ways, by: (1) providing personal mobility, and (2) influencing development patterns to create denser communities where less mobility is required as resources are more easily reached (Walker, 2011). By this definition, TODs give people mobility via mass transit (in this case, by rail) and access to employment and housing.

Socioeconomic conditions, access to transit resources, and levels of transit dependency impact trends in travel behavior. Throughout the literature on transportation and access, scholars have noted that low-income communities lack accessibility to public transportation options, which creates an equity issue (Lynch, 1981; Giuliano, 2005; Litman, 2008). Members of minority or low-income communities in urban areas are more likely to be regular transit users where public transit is offered (Giuliano, 2005). Research continues to examine the dichotomy between minority groups and affluent communities, and the difference between the ability to be mobile and the opportunities for access (Garrett & Taylor, 1994; Giuliano, 2005; Walker, 2011). Findings show that low-income or minority groups spend about 20 percent of their income on transportation, while wealthy families spend only about 15 percent (Bureau of Labor Statistics, 2015). Higher income families are able to be more selective about their housing and transportation choices. Levine (1999) and Chapple (2009) allege that as new generations and young families learn to appreciate the benefits of close proximity to transit, or at least selectively move to neighborhoods that are well-connected by transit (as in TOD areas), they inadvertently displace existing members of established communities.

Gentrification and displacement has also been studied in the literature as a consequence of “transportation mismatch” (Taylor & Ong, 1995; Ong & Miller, 2005). Stoll (2005) states that transportation mismatch accounts for the distance between a worker and their employment location, and also considers the difficulty of commuting to the suburbs for employment by public transit. Transportation mismatch analyzes whether the lack of car ownership by low-income or minority groups is a cause of displacement. Results from these types of studies indicates that transportation mismatch is an important factor in generating poor labor-market outcomes, particularly for disadvantaged neighborhoods. In Los Angeles, owning an automobile seems more important to workers than commute distance (Ong & Miller, 2005). Commute distance and access to public transit are important aspects to consider in employment accessibility.

The Bus versus Rail Debate

The purpose of mass transportation, as mentioned before, is to serve those who need it and to serve the common good by diverting travelers away from individual automobiles to reduce greenhouse gases emissions (Blumenberg & Ong, 2001). In an ideal world, bus and rail systems would be complementary by providing access to the highest amount of transit-dependent and choice riders, alike. However, federal and state transportation funds, which appropriates approximately 75 percent to highways and 25 percent to mass transit, creates competition between the two modes (United States Department of Transportation, 2014). Bus and rail systems need to vie for a small percentage of funds, while both have large capital and operational costs (Byron, 2014). Advocates and opponents of bus and rail have argued about the merits of both, leading to debates over costs, land development, and equity.

The cost of bus versus rail is one of the most debated topics amongst proponents and opponents of either mode. In a meta-analysis of the bus versus rail discussion, Zhang (2009) found discrepancies between operating and capital costs for bus and light rail. Most studies found that the capital cost of light rail is twice as expensive as it is for bus rapid transit – with the amount increasing to ten times for a regular bus system (Litman, 2014). The same was untested for operating costs because depending on which performance measures a study evaluates and the type of technology the system uses, it is unclear whether light rail or buses have the higher operating cost (Zhang, 2009). Accounting for Los Angeles’ context, however, Snyder (2009) asserted that it is more cost effective to invest in buses. He argued that Los Angeles’ land use patterns are more conducive for buses, especially when evaluated under a socioeconomic framework.

Some scholars and practitioners argue that rail has a larger impact on land development and property values. Light rail has a larger effect on land use patterns than buses, as it “offers a strong potential for land (re)-development in the station areas, that is, transit-oriented development” (Zhang, 2009, p. 87). However, there is no consensus on the degree of impacts. Various studies show that residential property values can increase if the property is within the vicinity of the rail, but can decrease if the property is adjacent to the right-of-way due to noise pollution. There can also be increases or decreases in property values based on residence type - single-family or apartments (Zhang, 2009). Furthermore, the data available on commercial values is even more inconsistent (Cervero & Duncan, 2002; Weinberger, 2001; Zhang, 2009). Zhang (2009) argued that rail systems have the capability to affect more than just land use and property values in the immediate

vicinity; changing property values also have indirect effects that lead to “higher population and employment density” (p. 87).

The competitive nature of asking for federal or state funding places constraints on agencies to decide between improving bus operations or investing in capital rail projects. According to Byron (2014), benefits are inequitably distributed as agencies typically choose to finance costly rail projects that serve fewer people. Rail opponents assert that rail has the opportunity for “economic benefits of boosting downtown real estate development” (Byron, 2014). Rail opponents also argue that cuts to capital or operating funds for buses mainly affect those who are transit-dependent – low-income, minorities, women, youth, and the elderly (Byron, 2014). Lower-income and minority groups are pushed out of the central city as cities become more dispersed, access to vital services become increasingly difficult for transit-dependent riders as fewer buses operate and bus lines get cut (Byron, 2014). Snyder argued that buses provide more options for everyone, not just the transit-dependent, because they offer flexibility in trip-chaining as “some people will transfer from buses on to rail, but they could also transfer onto buses” (2009, p. 13). On the other hand, rail serves a purpose by attracting more choice-riders to use mass transportation instead of driving (Blumenberg & Ong, 2001). This, in turn, generates societal benefits of decreased congestion and reduction of pollution emissions. The potential for rail to entice development and therefore increase other services in the area, encourages people to utilize transit over driving (Zhang, 2009).

While there are conflicting opinions in the bus versus rail debate, bus and rail could be complementary systems that feed into each other given the right amount of

planning, local context, and funding (Snyder, 2009). The findings from this study are intended to contribute to existing research and suggest recommendations in determining proper actions needed to resolve the matter on a local level. The subsequent section on the strengths and weaknesses of transit study methodologies may help to frame how the research on transit is done, and further contribute to an understanding of the issue on different scales.

An Overview on Transit Survey Research Methodologies

Transit users can be studied in a multitude of methods. Data can be gathered through interviews, surveys, or observations to find out information about personal characteristics, frequency of use, and origin and destination of users. Depending on the purpose of the study, studies can be designed to be representative and valid. This section examines three transit research methodologies – the National Household Travel Survey (NHTS), Metro’s Customer Satisfaction Survey, and the National Cooperative Highway Research Program.

Travel surveys provide information on travel behavior and travel demand of households and individuals at different scales. The NHTS, completed every five to eight years, is one of the most prominent and extensive travel behavior surveys which informs planners and policymakers nationwide on travel and transportation patterns (U.S. Department of Transportation, 2004). The NHTS was designed to be an in-depth survey with a focus on individual and household travel behavior (U.S. Department of Transportation, 2004). It is a two part survey which consists of a telephone survey and in-person interview, and aims for a large sample size (U.S. Department of Transportation,

2004). The 2001 NHTS had a sample size of approximately 70,000 completed surveys, achieved through a year long effort (U.S. Department of Transportation, 2004). The questions were designed to be overgeneralized, so that any individual, regardless of his or her location in the country, may find the questions easy to answer.

The Metro Customer Satisfaction Survey, on the other hand, was designed to be short, close-ended, and aimed for in-person respondents or online replies (Los Angeles County Metropolitan Authority, 2014). The questions and method of conducting the survey was designed to capture many participants for a high response rate. Questions on Metro's survey asked localized questions specific to the Los Angeles region. The findings are often used in travel demand forecasting to develop future transportation plans based on local and regional needs.

Different research methodologies result in varying forms of data that are unlikely to be congruent with other surveys. The inconsistent variables used for data collection – ranging from survey design to sample population – make it difficult to repeat studies, extend the findings to the general population, and create policies to enhance mass transportation. The National Cooperative Highway Research Program created a guide for transportation professionals in the public and private sector intended to address this inconsistency. The guide aims to provide standardized methods for transit surveys in order to improve the quality, reliability, and analyses of data (Transportation Research Board, 2008). The report states that surveys do not need to follow the recommendations completely, but should attempt to handle question design, data collection procedures, data

entry procedures, and documentation similarly to produce better results that can be more widely applied (Transportation Research Board, 2008).

Although the transit user survey of our study does not utilize the National Cooperative Highway Research Program guide, it helps fill a research gap in transit user ridership data. Current Metro transit ridership data identifies user demographics such as income, ethnicity, habitual travel, age, and gender. Their results provide knowledge about the people who *use* transit, and the people who live *near* transit; however, little is understood on the overlap between these groups. The transit survey intends to fill this void in the research by identifying transit users who reside around TODs and determining whether they are transit-dependent or choice riders. In identifying these groups and the extent to which they benefit directly or indirectly from Metro's investments in rail, this transit user survey analyzes one dimension of social equity and TOD.

Methodology

The purpose of the survey was to collect demographics of the people who use rail infrastructure and to understand the origin and destination of their trips. From the results, we evaluated which type of riders benefit more from the rail investment. This study uses a quantitative, closed-ended survey approach. A total of 664 transit surveys were collected at six Metro rail stations:

- 103rd Street/Watts Tower (Blue Line)
- Chinatown Station (Gold Line)
- Expo/Vermont Station (Expo Line)
- Highland Park Station (Gold Line)

- Hollywood/Western Station (Red Line)
- Mariachi Station Plaza (Gold Line)

Potential participants were chosen at random while they entered or exited the rail station. Eligible participants were over 18 years of age. We attempted to collect 100 surveys per station (see Appendix 2.9), to ensure a 90 percent confidence level in the findings.⁴ To capture a variety of transit users, surveys were collected during different travel times in accordance with Metro's peak, off-peak, and weekend hours.⁵ Using these predetermined time frames, surveyors collected 33 to 34 surveys per time frame at each station. Fifteen UCLA Master of Urban and Regional Planning candidates collected the surveys from January 2015 to April 2015. The survey instrument was translated in Spanish (see Appendix 2.5) and Chinese (see Appendix 2.6). Our survey questions were developed around the three research questions detailed below.

Key Research Questions

- Who are riders of Metro rail?

We asked participants about their demographics (e.g., age, ethnicity, income, and highest educational attainment); by recognizing the demographics of transit riders who utilize rail, we were able to infer information on the population that does not ride rail by process of elimination.

⁴ The sample size was determined using Metro's December 2014 data on rail ridership for each rail line. The statistics indicate that each rail line had more than 100,000 boardings per month (Los Angeles County Metropolitan Transportation Authority, 2014). The 600 transit users out of 100,000 indicates a 90% confidence interval.

⁵ Los Angeles County Metropolitan Transportation Authority. (n.d.). On-peak hours are from Monday through Friday from 5:00 A.M. - 9:00 A.M. and 3:00 P.M. - 7:00 P.M. Off-peak hours are from Monday through Friday from 9:00 A.M. - 3:00 P.M. and 7:00 P.M. - 10:00 P.M. Weekend hours are anytime on Saturday and Sunday. <http://www.metro.net/riding/fares/>

- Why are transit users using rail?

We were curious about riders' frequency of use and their transportation options. We asked about users' primary mode of transportation and average weekly rail use. Specifically, we wanted to find out whether users were riding rail out of choice or necessity. Therefore, we asked whether the user could have made the trip by car. We also asked users to identify the type of place (home, work, shopping, social, other) they were going to or coming from to understand how they use Metro rail in their everyday lives.

- Who benefits from rail investments?

In addition to asking about user demographics, we were also interested in identifying local riders who reside within the TOD area, and riders who were non-local residents living outside of the TOD area. We asked questions regarding the riders' current residential zip code, whether their origin or destination was within a ten-minute walk from the transit station, and whether their origin or destination was their place of residence. By asking these questions, this survey identified whether more visitors or local residents were using transit infrastructure and therefore, benefitting from rail investments.

Survey Development

The survey instrument contains thirteen questions, which were inspired by several transit behavior surveys and tailored to answer the key questions specific to this study.⁶ The final survey instrument was designed to provide information on trip purpose, demographics, and gauge participants' average use of Metro rail. Questions were

⁶ California Department of Transportation: Caltrans, 2013; City of El Monte, 2014; Los Angeles County Metropolitan Transportation Authority, 2004; Los Angeles County Metropolitan Transportation Authority, 2014; National Household Travel Survey, 2004; Metropolitan Council for the Twin Cities Region, 2013; United States Census Bureau, 2013

purposely ordered to ask general questions about their rail usage, then asked more sensitive information, such as income and ethnicity.

The survey instrument was beta tested twice to help identify confusing questions, determine survey length, and test the order of the questions. Preliminary surveys were administered to ten UCLA Master of Urban and Regional Planning students and to one random bus rider. The beta testing process included an explanation of the study, verification of consent, acknowledgment of confidentiality, and a verbal walk--through of all survey questions. Based on recommendations from the participants, questions and answer choices were reordered, omitted, or edited to be more concise.

On February 8, 2015, two surveyors conducted the survey at the Hollywood/Western Station. Surveyors found some issues that were not previously identified in the two rounds of beta testing. As a result, the survey was changed. One question was reworded to identify both users entering and exiting the station. Questions regarding mode of travel to and/or from the station were eliminated and not included in the final data tabulations, as they were irrelevant to the purpose of the study. Consequently, surveys from this field visit were not included in the final findings.

Procedure and Data Collection

Preparation for the commencement of fieldwork required several steps, including contacting Metro and training the surveyors. Metro staff members were contacted to inform them about the purpose of the study as well as to obtain permission to conduct the

transit surveys on Metro property.⁷ We drafted a permission letter that was signed by a transportation planner at Metro in case fare enforcement or Sheriff's deputies asked for identification (see Appendix 2.4).

On February 11, 2015, UCLA Master's students received protocol training on how to conduct surveys. Prior to training, an internal "Surveyor Guide" was created as a script for surveyors. The script included a pitch to capture potential participants as well as notes on how to answer potential questions about the purpose of the study (see Appendix 2.7). The training allowed the surveyors to review the instrument, ask questions about survey development, and practice administering the survey.

Additionally, surveyors were reminded to be aware of their own potential biases when approaching potential participants and were directed to randomly approach riders. In order minimize selection bias, surveyors were instructed to ask all available users walking past them to take the survey regardless of appearance or gender. If the participant agreed to take the survey but was unable to complete it on their own, the responses would be declared invalid. Examples of such circumstances included language barriers and/or individuals' mental capacity prevented them from understanding the survey, such as when it was determined that the person was under the influence of alcohol or drugs. Our field notes indicated that less than one percent of surveys were invalid due to users' conditions. Surveyors were also instructed to complete the "For Internal Use Only" field notes section (see Appendix 2.2) and an online "Transit Survey

⁷ In order to conduct surveys on the platform, passed the fare gates, surveyors are required to take a safety class offered by Metro. The rail safety certification would take approximately two to three hours and each surveyor would need to participate in the class. After considering the advantages and disadvantages of surveying passed the fare gates, we decided that surveys would only be conducted outside the fare gates.

Collection Data” form that documented the number of surveys collected at each station (see Appendix 2.8). Surveyors went to Metro stations in pairs when possible to ensure safety and accountability.

Data Collection

Participants had the option to independently fill out the survey or have the surveyor verbally conduct the survey. Each survey took approximately one to two minutes to complete. While surveyors could survey anywhere near the station platform, they were given suggestions on where to stand from other surveyors who conducted prior fieldwork at the same station. For example, Mariachi Station is underground and has two sets of escalators leading to the street. We recommended that surveyors stand in the area between the escalators, so they could administer the survey while riding the escalator with participants.

Prior to surveying, survey developers checked and documented any holidays or special events that occurred on the surveying dates that may have impacted ridership for the day. The two anomalous dates which surveyors conducted fieldwork were on a Saturday or Sunday holiday.⁸ For that reason, the data collected on those dates were not affected because Metro considers holidays as part of their weekend category.

Station Characteristics

The physical design of the rail stations also impacted the conceptualization of our survey methodology. All the rail stations differed in scale, orientation, number of levels,

⁸ Hollywood/Western Station was surveyed on Valentine’s Day, February 14 (Weekend/Holiday). Chinatown Station and Watts Station were surveyed on Easter Sunday, April 5 (Weekend/Holiday).

entrances and exits, and exposure and enclosure. These characteristics are further detailed below (see Appendix 2.10 for Metro Boarding and Alighting Data):

103rd Street/Watts Tower, served by the Blue Line, is an outdoor and at-grade station located adjacent to Grandee Avenue near the intersection of 103rd Street. This is the only station of the six case study stations that provides parking with 62 spaces, but does not offer bicycle facilities. The fare gates are located before the only entrance/exit available at this station. The Blue Line runs every six to ten minutes from Monday to Friday, and every eight to twelve minutes on weekends and holidays.

Chinatown Station, served by the Gold Line, is an elevated station above the intersection of North Spring Street and College Street. The station has two levels with five entrances/exits, which have two elevators and three stairways that lead up to the station. Fare gates are located at ground level near the elevators and the bottom of the stairs. Additional fare gates also exist atop a mid-level before the escalators to the tracks. The station provides six bike racks for bicycle parking and there is no vehicular parking available. On Monday to Friday, the Gold Line runs every twelve minutes, except for during peak commute hours where it arrives every six minutes. Over the weekends and on holidays, the train runs every fifteen minutes, with mid-day service every seven to eight minutes.

Expo/Vermont is an outdoor station along the Expo Line located on Exposition Boulevard at Vermont Avenue. The station is at-grade with two raised platforms on either side. The station has only one entrance/exit each for either side of the platform. Fare gates are located before the platforms. Bicycle facilities include ten bike racks. There is

no parking offered at Expo/Vermont. The Expo Line frequents this station every twelve minutes, seven days a week.

Highland Park is outdoors, at grade, and has two tracks and a center platform. The station, which is a stop on the Gold Line, is located at the intersection of North Avenue 57 at Marmion Way. Metro does not offer parking for this station. Bicycle facilities include eight bike racks and eight bike lockers. There is entrance/exit on each end of the platform.

Hollywood/Western is the only heavy-rail line of the six stations and the most patronized station. The station, served by the Red Line, is located at the intersection of Hollywood Boulevard and Western Avenue. Hollywood/Western has one ground level entrance/exit with two subterranean levels – B1 is the Mezzanine with ticket machines, fare gates, and elevator access; B2 has the rail tracks and platform. The station does not offer parking. Bicycle facilities include ten bike racks and two bike lockers. At this station, the train arrives every ten, twelve, and fifteen minutes depending on time of day, seven days of the week.

Mariachi Plaza is a subterranean subway station located in Boyle Heights at the intersection of 1st Street and Boyle Avenue. The Gold Line serves Mariachi Plaza and the station has one elevator entrance/exit as well as another opening with stairs/escalator. The station has a mid-level split. There is no parking available at this station. The light rail frequents every twelve minutes, except during on-peak commute hours when it arrives every six minutes on Monday to Friday. Over the weekends and on holidays, the train frequents every fifteen minutes, with mid-day service every seven to eight minutes.

Mariachi Plaza Station experiences the lowest ridership numbers of the six stations.

Challenges and Limitations

To ensure that the data fits the purpose of the study, probable drawbacks were considered in the data collection process during the development of the survey instrument and methodology. Surveyors did experience challenges while conducting fieldwork, including issues with resources, response rates, language barriers, and station-specific characteristics. We also acknowledge that this data is limited in that it presents user demographics and their travel behavior only during a specific time and place. Therefore, the data was weighted against Metro's 2014 rail ridership data to account for these limitations the the Data Analysis section.

Surveyors noticed several demographic trends at all the stations that skewed the data. Firstly, there was an overrepresentation of male riders at all stations because men seemed more willing to respond to female surveyors. Although participants were supposed to be randomly selected, we attempted to stratify the sample of respondents midway through the data collection by instructing surveyors to approach more women. Although we tried to correct for the overrepresentation, there is still a disproportionate amount of male users in the data. This was a constraint that unfortunately could not be resolved since there were a larger proportion of female surveyors in the class.

Secondly, there were issues with language barriers. The survey instrument was only translated into Spanish and Chinese, which may have restricted other non-English users from participating in the survey. Additionally, only three of the fifteen surveyors either spoke fluent Spanish or Cantonese. The lack of Spanish-speaking surveyors was a

noticeable limitation that resulted in an estimated 75 percent of Spanish-speaking riders who refused to take the survey. To account for ethnic response rates for the survey, race was weighted based on Metro data and Los Angeles County data on user demographics and on post-survey collection estimates. Lastly, we noticed that riders that appeared to be in their mid-twenties and over 60 years old were more likely to respond, especially during on-peak hours.

Each station had specific design characteristics that also may have affected the data collection. The physical characteristics of the station made it difficult to capture potential participants. For example, Chinatown has five entrances and exits; because surveyors collected fieldwork in pairs, they were unable to survey at each entrance/exit. Expo/Vermont's inbound and outbound tracks are on either side of the street, which posed a problem when there was only one surveyor. The inbound tracks go towards downtown Los Angeles, while the outbound tracks go towards Culver City, which is mostly residential in comparison. When surveyors collected data alone, they were often stationary, limiting their ability to capture potential respondents. The data on origin/destination could have been impacted depending on where the surveyor stood.

The research team gathered the transit survey results to identify the commonalities and differences of rail riders, their demographics, travel patterns, and reasons they use rail. The following data analysis section itemizes the findings and explores which group of riders, local or non-local, benefit from the rail investments.

Data Analysis

The data analysis section is organized according to the study's three key research questions. First, this section presents the demographics of all of the survey participants compared to Metro and Los Angeles County data. Second, this section identifies why transit users ride rail and presents riders' origins and destinations, average usage and frequency, and primary mode of transportation. Third, this section distinguishes those who benefit from rail infrastructure and compares ridership between riders who do or do not live in TOD neighborhoods. Based on these questions, this chapter reveals that about half of all riders were low-income, have used Metro rail for at least five years, and primarily used rail to commute to work. Additionally, this study found that 35 percent of those surveyed fell into the category of local TOD residents. Lastly, the data revealed that the benefits of rail infrastructure and investments, such as improved access and mobility, varied amongst the stations.

Aggregate Results for the Six Stations and Selected Characteristics

This section summarizes the demographics of all of the participants at the six Metro rail stations, including gender, race, age, education, income, and length of ridership. For the purposes of this data analysis, users who live within and outside of the TOD station area are considered local and non-local users. The data from this transit survey also compares its results to City of Los Angeles demographics data to provide an urban context.

Who are riders of Metro rail?

We wanted to know about rider demographics to understand the users of Metro rail. Specifically, we wanted to identify the demographic differences between local and non-local riders to see if certain groups utilized rail more than others. We found that 35 percent of riders were local and more Hispanic or Latino and Black/African Americans use rail. Additionally, a majority of riders were low-income, and have at an education level of at least some college/associate's degree. When comparing this survey's and Metro's data to the City of Los Angeles' data, our data finds that more men used rail (see Table 2.01). Most riders use Metro five or more days a week, and have been riding rail for over five years.

Race

This study and Metro's data both revealed ethnic trends in ridership. Most riders were Hispanic or Latino, followed by Black/African American, Non-Hispanic White, Asian/Pacific Islander, and "Other" (see Table 2.01). However, Metro data showed higher percentages of Hispanic or Latino and Black/African American users, but a lower percent of "Other" riders. This study shows the percentage of Black/African American riders (26 percent) is higher than Metro (18 percent) and three times more than the City of Los Angeles (9 percent). The opposite can be said about non-Hispanic Whites who comprise 29 percent of the City's population, but account for only 16 percent of rail riders. Among all local riders, the percentage of Hispanic/Latino riders was reflective of the County and City of Los Angeles demographics. However, among Asians, non-local riders (18 percent) were almost four times greater than local residents (4 percent). According to County demographic data, Asians are the largest ethnic group in

Chinatown; however, compared to the other demographic groups, a majority of Asians in our study did not live within TOD areas.

Table 2.01 <i>Comparison of Riders' Gender and Race Between Metro and Our Findings</i>							
	Female	Male	Non-Hispanic White	Black/ African American	Asian	Hispanic or Latino	Other
City of Los Angeles	50%	50%	29%	9%	11%	49%	2%
Metro	46%	54%	17%	18%	12%	47%	6%
UCLA Transportation Survey	41%	59%	16%	26%	13%	35%	11%
Non-local (Out of Total Riders)	39%	61%	15%	28%	18%	29%	11%
Local (Out of Total Riders)	45%	55%	17%	22%	4%	47%	11%

Notes: Other includes two or more races. Hispanic or Latino are one category.
 Source: Data for City of Los Angeles from 2009-2013 ACS, 5-Year Estimates; Data for Metro from Metro Rail Customer Satisfaction Survey (2014); Data for UCLA Transportation Survey from UCLA Equitable TOD Study 2015

Income & Education

Both Metro and our survey found that rail is heavily utilized by low-income riders. Although the Metro survey asked riders for household income and our survey asked for individual income, 44 percent of Metro’s riders were below the poverty line while 46 percent of this study’s users reported an annual individual income of less than \$15,000 (see Table 2.02). Of those with high incomes, only 18 percent of users reported annual individual incomes of higher than \$50,000. Out of the ten percent of high income riders, almost 80 percent of them were non-local riders. Thus, our data supports the inverse relationship between income and ridership showing that as incomes increase, public transit use decreases.

Table 2.02

Non-local and Local Riders by Individual Annual Income

	<u>\$0 - \$15,000</u>	<u>\$15,000 - \$34,999</u>	<u>\$35,000 - \$49,999</u>	<u>\$50,000- \$74,999</u>	<u>\$75,000 or more</u>
Non-local	29%	15%	9%	6%	8%
Local	18%	8%	5%	3%	2%
Total (All Users)	47%	23%	14%	9%	10%

Note: Income was regarded as a sensitive question. If income was left blank, the survey was still considered complete and entered into the database.

Source: Data from UCLA Equitable TOD Study 2015

We asked riders what their highest level of education was and found that a majority (69 percent) obtained some college/associate’s degree or higher (see Table 2.03). We excluded some riders with education levels lower than a high school diploma by only surveying users who were 18 years or older. We found that 103rd Street/Watts Tower, Mariachi Plaza, and Expo/Vermont Stations have the highest percentages of riders with only a high school diploma, while the majority of riders from Chinatown, Highland Park, and Hollywood/Western have at least a Bachelor’s degree. Chinatown, in particular, had a significant number of riders with advanced degrees despite its low ridership and proximity to academic institutions. Surprisingly, Expo/Vermont’s proximity to USC did not increase the percentage of rider education as a majority of its riders had a high school diploma.

Table 2.03 <i>Highest Education Level for Riders per Station</i>					
	<u>Advanced degree</u>	<u>Bachelor's degree</u>	<u>Some college / Associate's degree</u>	<u>High school diploma</u>	<u>Less than a high school diploma</u>
103rd Street/Watts	3%	8%	39%	38%	12%
Chinatown	21%	42%	16%	19%	3%
Expo/Vermont	10%	12%	35%	36%	7%
Highland Park	12%	34%	25%	22%	7%
Hollywood/Western	10%	41%	32%	13%	4%
Mariachi Plaza	5%	11%	30%	35%	19%
Note: Bold denotes the highest percentage of education level of riders per station. Source: Data from UCLA Equitable TOD Study 2015					

Length of Regular Ridership

We asked riders how long they had been riding Metro rail to identify long-term and short-term riders. Table 2.04 compares ridership length between non-local and local riders to identify whether ridership is positively related to proximity to transit. We found that 48 percent of users were long-time riders, characterized by five or more years of riding any Metro rail line. Our data captures a smaller percentage of long-term riders compared to Metro, but a larger percentage of riders who have ridden rail for less than one year. Among all local riders, a majority (55 percent) have been riding rail for five or more years. The relationship between proximity to transit and years ridden can be seen as the percentage of local riders increased with the years of ridership. This pattern is not

consistent amongst non-local riders, who have a larger percentage of users who have ridden rail in the less than one year category than the 1-2 years category.

Length of ridership and ridership levels were compared by station, and we found that older stations experienced higher boarding rates overall. Approximately 46 percent of all riders have been riding Metro rail for five or more years, while 21 percent of all users are new riders. The percentage of new users surpasses riders in the categories of ridership for 1-2 years (15 percent) and 2-5 years (18 percent). Expo/Vermont and Mariachi Plaza are the newest stations opened; with the exception of Chinatown, they have the lowest ridership rates (see Table 2.04). Furthermore, 36 percent of Expo/Vermont riders have been riding Metro rail for five or more years even though the station opened in 2012, indicating that these Expo/Vermont users have utilized Metro rail prior to the station’s opening.

Table 2. 04 <i>Comparison of Length of Regular Ridership Between Metro and Our Findings</i>				
	<u>Less than one year</u>	<u>1-2 years</u>	<u>3-4 years</u>	<u>5+ years</u>
Metro	10%	16%	14%	60%
UCLA Transportation Survey	18%	15%	19%	48%
Non-local (Out of all riders)	20%	15%	21%	44%
Local (Out of all riders)	15%	15%	15%	55%
Sources: Data for Metro from Metro Rail Customer Satisfaction Survey (2014); Data for UCLA Transportation Survey from UCLA Equitable TOD Study 2015				

Why are transit riders using rail?

In addition to understanding who the riders are, we wanted to investigate the reasons why they were using rail. We asked riders their origin and destination, how often they rode rail, if they had a car and driver's license, and what their primary mode of transportation was within the last month. We wanted to find out whether more people were transit-dependent riders or choice riders. Our research found that half of all riders commute to work, and 70 percent of riders reported using public transit as their primary mode of transportation within the last month.

Frequency

We asked how often users ride Metro rail on average, and found that most users ride rail frequently. The highest percentage of weekly ridership at every station was five to seven days, similar to Metro's data (66 percent) (see table Table 2.05). Chinatown had the lowest percentage of users riding five to seven days, while 103rd St/Watts Tower had the highest. Although Chinatown and Expo/Vermont had low ridership, Chinatown had more riders who frequented the stop for less than one day a week and 1-2 days a week. In comparison, a striking 95 percent of Expo/Vermont riders were frequent users, riding rail more than 3 days a week. Thus, average frequency may not be the determinant of low ridership as it tended to fluctuate amongst the different stations. Although Expo/Vermont had low ridership, it had more frequent riders than Hollywood/Western and Highland Park, the two stations with the highest ridership (according to Metro data)

Table 2.05					
<i>Average Frequency of Ridership per Station (in days/week)</i>					
	<u>5-7 days</u>	<u>3-4 days</u>	<u>1-2 days</u>	<u><1 day</u>	<u>First time riding Metro</u>
103rd/Watts	70%	14%	12%	2%	2%
Chinatown	48%	18%	19%	13%	2%
Expo/Vermont	71%	24%	5%	1%	0%
Highland Park	50%	23%	22%	4%	0%
Hollywood/Western	61%	15%	16%	7%	2%
Mariachi Plaza	66%	18%	11%	5%	1%
Source: Data from UCLA Equitable TOD Study 2015					

Origin and Destination

Our data showed that 47 percent of users travel to work, which can possibly be a reason for why riders frequent rail five or more days a week (see Table 2.06). Outside of travel to work, on average, 35 percent of local residents used rail to travel to/from social/family, shopping, and other types of destinations. These percentages between local and non-local users were fairly similar. In identifying the riders' origins and destinations, we can understand the types of local attractions that bring riders to specific TOD neighborhoods.

Table 2.06 <i>Types of Origin/Destination and Mode of Transportation by Non-local and Local Riders</i>				
	<u>Work/business</u>	<u>Social/Family</u>	<u>Shopping</u>	<u>Other</u>
Non-local	48%	17%	14%	21%
Local	48%	16%	11%	25%
Source: Data from UCLA Equitable TOD Study 2015				

Primary Mode of Transportation

We asked riders which mode of transportation they used the most over the last month, such as bicycling, taxi, personal vehicle, public transit (i.e. bus, light rail, train), or other. To gain a more concise reading of the results, we consolidated responses into three categories: active, vehicle, and public transportation. Active transportation includes biking, walking, and skateboarding, while vehicle includes both taxis and personal vehicles. Our data showed that most non-locals used vehicles as their primary mode of transportation, while more locals used active transportation. When primary mode of transportation was combined with length of ridership, our data showed that the percentage of vehicles decreased as the length of rail ridership increased. Therefore, there is a positive relationship between length of rail ridership and public transit as a primary transportation mode.

Table 2.07 <i>Primary Modes of Transportation for Non-local and Local Riders</i>			
	Active	Vehicle	Public Transit
Non-local	54%	75%	65%
Local	46%	26%	35%

Source: Data from UCLA Equitable TOD Study 2015

Transit-Dependent or Choice Rider

We asked participants whether they had a driver's license, and if they could have made their trip using a car to distinguish between transit-dependent riders and choice riders. In the context of this survey, the question on vehicle access only identifies users who did not have access to a car for one specific trip. Thus, this study defines transit-dependent riders as those who did not have a license and access to a car for the particular trip in which they completed the survey. Transit-dependent riders differ from license holders without a car because license holders may have the legal ability to drive a vehicle, if available. Choice riders are transit users who choose to use transit even though they have the ability to make their trip by car. In the context of this study, choice riders own a license and could have made their trip using a car, even though access to a car may possibly be temporary. We found that 35 percent of users are choice riders compared to 26 percent of transit-dependent riders (see Table 2.08).

Table 2.08 <i>Transit-dependent or Choice Non-local or Local Riders</i>			
	License holder & car access (Choice rider)	License holder, but no car access	Neither license nor car access (Transit-dependent rider)
Non-local	37%	38%	25%
Local	33%	41%	26%
All Riders	35%	39%	26%
Source: Data from UCLA Equitable TOD Study 2015			

Who benefits from rail investments?

The benefits of transit infrastructure and investments vary from station to station depending on access and proximity to different types of destinations. In evaluating who benefits, we wanted to find out whether the people who lived near the stations comprised the majority of users, and therefore, were the people who benefitted the most from TOD infrastructure. Our results showed that, of all riders, 35 percent were local and 65 percent were non-local.

We examined local and non-local users by station and found that Chinatown, Expo/Vermont, and Hollywood/Western had the highest percentage of non-local riders, respectively (see Table 2.09). The reasoning could be that these station areas offer the most employment opportunities (as seen in the number of businesses located in the station areas), and commute to work comprises a large percentage of why participants

ride Metro rail. Highland Park had a slightly higher percentage, and Mariachi Plaza had a substantially higher percentage of local riders than non-local riders.

Table 2.09 <i>Non-local and Local Riders by Station</i>			
	<u>Non-Local</u>	<u>Local</u>	<u>Number of Businesses</u>
103rd Street/Watts Tower	53%	47%	266
Chinatown	81%	19%	1,101
Expo/Vermont	77%	23%	335
Highland Park	48%	52%	536
Hollywood/Western	73%	27%	1,338
Mariachi Plaza	43%	57%	558
Source: Data from UCLA Equitable TOD Study 2015 Number of Businesses from the National Employment Time Series Database 2011			

Figure 2.01 below shows each station as it relates to the others. The figure demonstrates the correlation between level of ridership and the number of non-local and local users who use the station. The ridership statistics are provided by Metro boarding and alighting data (see Appendix 2.10) and the number of non-local and local users was calculated from the data from this transit survey. The y-axis represents the scale of non-locals or locals who use each station and the x-axis represents the number of average daily boardings.

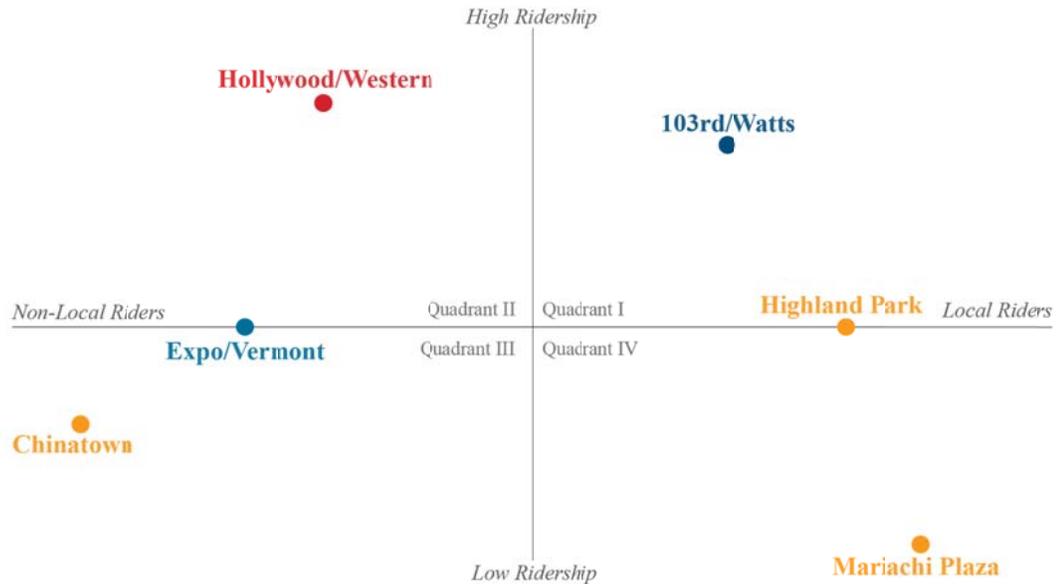
The first quadrant shows that 103rd Street/Watts Tower and Highland Park Stations exhibited high usage rates by local riders. The second quadrant displays high

ridership by non-locals and shows that Hollywood/Western Station had the highest ridership by non-locals when compared to the other stations. Although Expo/Vermont and Highland Park are on two separate quadrants, both have the same percentage of Metro ridership (15 percent each). The fourth quadrant shows that Chinatown has a low percentage of ridership and local riders. This was not a surprising finding due to high tourist activity in Chinatown. Lastly, Mariachi Plaza falls within the fourth quadrant as the most underutilized of the six rail stations in terms of ridership, but experienced the highest percentage of local users.

The three stations that exhibited the highest ridership – Hollywood/Western, 103rd Street/Watts Tower, and Highland Park – are similarly located outside the Los Angeles city center. The geographical limitations of these stations prompt riders to utilize the rail to gain access to downtown Los Angeles. Despite bus service offered in these areas, rail is understandably the faster and more direct mode of travel from the peripheral neighborhoods where these stations are located. Meanwhile, the stations that are closer to downtown Los Angeles and centrally located – Chinatown, Mariachi Plaza, and Expo/Vermont – experienced lower ridership. We infer that this is because travelers who are more centrally located have more options of other modes of public transit. Low ridership at Expo/Vermont Station off the Expo Line could be explained by its recent opening in 2012, as riders may need time to gain to become accustomed to the line. A low number of boardings at Mariachi Plaza suggests that the station competes with Metro buses that run parallel to the rail line. Bus lines may appeal more to local users due to accessibility to further destinations that the rail cannot reach. Similarly, Chinatown Station's proximity to Union Station as well as downtown Los Angeles competes for

riders with Metro buses and DASH (Downtown Area Short Hop) buses offered by the Los Angeles Department of Transportation.

Figure 2.01 - Axis of Ridership Usage and Scale of Non-Local and Local Users at Each Station



Source: Data from UCLA Equitable TOD Study 2015

Conclusion

This study showed that 35 percent of surveyed users were local TOD residents and about half of riders were low-income users who travel to and from work. A majority of riders said they had been riding Metro for five or more years and ride rail up to five or more days a week. In regards to the individual case study stations, the benefits of transit infrastructure and investments varied from station to station depending on access and proximity to different types of destinations. Our findings showed that Chinatown and Expo/Vermont Stations are the most underutilized due to a low number of local riders and also low overall ridership. With fewer riders using these stations, these areas seem

less likely to be vulnerable to outside forces that may cause immediate neighborhood change. Highland Park and 103rd Street/Watts Tower, however, were the most utilized stations because they have high ridership and a higher percentage of local riders. Therefore, local riders in these station areas seem to benefit from rail investments as opportunities of employment or housing are more accessible. On the other hand, the Hollywood/Western Station experienced high ridership from non-local users. This characteristic may cause the area to be susceptible to outside influences that may lead to displacement of locals as greater waves of non-locals inhabit the TOD area. These findings give a better understanding to the effects of rail investment to the communities surrounding each station area and the response to neighborhood changes.

Recommendations

This study recommends three strategies to increase transit ridership and reduce or maintain transportation costs for local, low-income transit users:

- 1) The City of Los Angeles should use specific plans near most rail transit stations to encourage new housing production and preserve existing low-cost housing.
- 2) The City of Los Angeles should incentivize employers to implement public transit subsidy programs for workers who commute by transit.
- 3) Metro should establish public-private partnerships with CBOs or nonprofits to implement fare assistance programs to serve low-income clients.

The following sections will further describe each strategy.

1) The City of Los Angeles should use specific plans near most rail transit stations to encourage new housing production and preserve existing low-cost housing.

Specific plans facilitate TOD areas with development standards and design guidelines. The standards and guidelines dictate the physical form of TOD projects to ensure that the project fits within the planning code. In addition to guidelines and development standards, we propose amending station area specific plans with strategies that protect existing residents from displacement in order to maintain or increase transit usage by local residents.

The amendments to specific plans should focus on protecting or providing housing to encourage local ridership. Chinatown and Expo/Vermont Stations, compared to other stations, are underutilized as demonstrated through its low average daily boardings. For Chinatown Station, a majority of riders were non-local. The small number of local users is a possible result of unattractive housing options for the Chinatown Station area. For Expo/Vermont Station, limited housing choices with non-residential land uses immediately surrounding the station area help explain similar daily boardings patterns. Excluding USC's university housing, Expo/Vermont's proximity to the campus constrains housing availability; this characteristic may deter users such as young families or older couples from residing in the area. Low ridership also indicates that those who are employed or reside in the station areas may potentially use other modes of transportation. Therefore, land use strategies in the forms of TOD specific plans should be amended to increase local housing options and strengthen access to rail.

2) The City of Los Angeles should incentivize employers to implement public transit subsidy programs for workers who commute by transit.

This study provided evidence that a majority of riders utilize rail to commute to work. Proportions of these riders are low-income and transit-dependent, making them vulnerable to fluctuations in service or increases in base fares. Increases in fares would financially burden low-income riders who have no other choice but to use rail transit. Therefore, public transit subsidy programs are an important step in maintaining ridership for low-income riders and ensuring that these individuals have adequate access to all types of public transportation.

In order to appeal to more users, this study suggests offering incentives to employers, large or small, with payroll tax credit if they adopt or partake in the County's Commuter Benefit Plan which designates public transit costs to disadvantaged users. This program is easy for employers to implement and similar programs are already in place in other metropolitan cities. Employers and their workers benefit in that the commuter plan allows for tax-paying riders to reduce their commuting costs up to 40 percent and employers to cut down their payroll taxes on average by 7.65 percent, ultimately reducing the financial impact of future fare increases (Edenred USA, 2015). This subsidy, combined with employment options' proximity to rail, offers affordability and convenience to local transit riders, which in turn could attract more ridership.

3) Metro should expand its public-private partnership to include additional CBOs or nonprofits to implement fare assistance programs to serve low-income clients.

The realities of gentrification and displacement often associated with TOD exemplify the concerns of CBOs. CBOs protect existing residents and businesses in the community by responding to threats of displacement. CBOs often work with local government to preserve and provide opportunities for all residents. In transit-oriented cities around the nation, local governments subsidize transit fares for disadvantaged residents through public-private partnerships. For example, nonprofit organizations and governmental entities in the City of Portland receive 20 percent administration credit to finance purchases of TriMet fares for their low-income constituents if they meet minimum requirements (TriMet, 2014). The City of San Francisco allows free Muni for youth (5-18 years old), seniors over the age of 65, and eligible low- to moderate-income people with qualifying disabilities. Eligibility is determined by an individual's gross annual family income at or below 100 percent of the Bay Area median income level (SFMTA, 2014).

Metro currently adopts a version of these programs, but only use two CBOs to distribute fare subsidies. An expansion to include additional CBOs would be beneficial in reaching the vast majority of transit users in Los Angeles. Metro already implements a Rider Relief program that offers subsidized monthly fare coupons and uses participating providers to distribute passes (Los Angeles County Metropolitan Authority, 2015). They can expand both existing programs to resemble San Francisco's or Portland's, and use Los Angeles' CBOs and the CBOs' relationship to their respective communities to attract

more local riders. For example, the Thai Community Development Center could serve as the leading organization to participate in the fare assistance program to distribute fares for local members of their community, particularly around Hollywood/Western.

Conclusion

This research presented transit user data on who uses rail, why they use it, where they go, and how they benefit in order to inform communities and institutions' decision-making in creating contextually specific transit policies and investments. Although the findings assessed the equity needs of a small group of stakeholders, local and non-local rail riders, the transit survey research team believes that the findings and recommendations provide further insight on the impacts of rail investment on transit ridership and neighborhood change. We were able to differentiate why and how often transit riders use rail to access the resources they need through a local or non-local rider framework. Moving forward, additional research can build upon this study to ensure that transit riders have equitable access to benefits from investments in transit-oriented development projects.

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CHAPTER 2: APPENDICES

Appendix 2.1 UCLA Transit Use Survey (English)

UCLA Transit Use Survey

THIS SURVEY IS COMPLETELY VOLUNTARY. ALL INFORMATION WILL REMAIN CONFIDENTIAL.

-
1. What TYPE of place are you COMING FROM right now? (Please check ONE)
- Work/business School
 Home Medical/health services
 Shopping Social/family
 Other (please specify): _____
2. What TYPE of place are you GOING TO right now? (Please check ONE)
- Work/business School
 Home Medical/health services
 Shopping Social/family
 Other (please specify): _____
3. Is the location you are coming from OR going to within a 10-minute walk (½ mile) from this transit station?
- Yes No
4. Which did you use most in the last month?
- Bicycled
 Taxi
 Personal vehicle
 Public transit (i.e. bus, light rail, train)
 Walk
 Other (please specify): _____
5. How long have you been riding Metro Rail (Blue, Green, Red, Purple, Gold, or Expo Line)?
- 5 or more years
 2-5 years
 1-2 years
 6-12 months
 Less than 6 months
6. On average, how many days per week do you ride Metro Rail (Blue, Green, Red, Purple, Gold, or Expo Line)?
- 5 or more days
 3-4 days
 1-2 days
 Less than once a week
 First time riding Metro Rail
7. Do you have a driver's license?
- Yes No
8. Could you have made this trip in a car today?
- Yes No
9. Please identify your age
- 18-24
 25-34
 35-49
 50-64
 65 and up
10. Please identify your ethnicity (Check all that apply)
- White (Non-Hispanic)
 Black or African American
 Hispanic or Latino (please specify): _____
 Asian (please specify): _____
 Other (please specify): _____
11. What is the highest degree or level of schooling completed?
- No schooling
 Less than a high school diploma
 High School
 Some college/Associate's degree
 Bachelor's degree
 Advanced degree
12. What was your individual annual income in 2014 before taxes?
- Under \$15,000
 \$15,000-\$34,999
 \$35,000-\$49,999
 \$50,000-\$74,999
 \$75,000 or more
13. Please provide the zip code of your current address:
- _____
-

Thank you for your participation in this survey!

Appendix 2.2 UCLA Transit Use Survey (Back Page for Internal Use Only)

UCLA Transit Use Survey

THIS SURVEY IS COMPLETELY VOLUNTARY. ALL INFORMATION WILL REMAIN CONFIDENTIAL.

FOR INTERNAL USE ONLY

Survey number: _____

Station Location:

- Mariachi Plaza – Gold Line
- Expo/Vermont – Expo Line
- Hollywood/Western – Red Line
- Highland Park – Gold Line
- 103rd and Watts – Blue Line
- Chinatown – Gold Line

Date/day of week: _____

(Please check one)

On-peak hours (M-F)

- 5:00 A.M. to 9:00 A.M.
- 3:00 P.M. to 7:00 P.M.

Off-peak hours (M-F)

- 9:00 A.M. to 3:00 P.M.
- 7:00 P.M. to 10:00 P.M.

Weekends

- Saturday
- Sunday

Time: _____

Interviewer: _____

Sex of participant: _____

Thank you for your participation in this survey!

Appendix 2.3 UCLA Consent Letter

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



UCLA

SANTA BARBARA • SANTA CRUZ

CENTER FOR THE STUDY OF INEQUALITY
LUSKIN SCHOOL OF PUBLIC AFFAIRS
6368 PUBLIC AFFAIRS BUILDING
BOX 951656
LOS ANGELES, CALIFORNIA 90095-1656

7 February 2015

Dear Metro Rail Transit Rider,

Students at the UCLA Center for the Study of Inequality are gathering information on transit riders and where they go as part of their Urban Planning Masters Program comprehensive research project. This comprehensive project is aimed at examining the impact of transit-oriented development on low-income communities in the Los Angeles area. Your responses are valuable and will inform policies related to new development around transit stations.

Please be assured that all information gathered through the study will be kept confidential. No individual's name will be directly associated with any specific response. Only summarized group information will be reported in publications or reports. Any information that is obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. You may discontinue participation without penalty. You are not waiving any legal claim or rights because of your participation in this research study.

If you have questions about the credentials of the student surveying you, please contact the UCLA Department of Urban Planning at the Luskin School of Public Affairs at: 3250 Public Affairs Building, Box 951656, Los Angeles, CA 90095. Or alternatively, questions can be answered over the phone at (310) 825-4025.

If you have questions about the project, please contact me at 818-270-0497.

Thank you.

Sincerely yours,

A handwritten signature in cursive script that reads "Silvia Jiménez".

Silvia Jiménez
Assistant Director,
Center for the Study of Inequality

Department of Urban Planning
Luskin School of Public Affairs
University of California Los Angeles
3250 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656
Phone: (310) 825-4025

Appendix 2.4 LACMTA Permission Letter

Memo #3

04 February 2015

Appendix A: LACMTA Permission Letter



Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

30 January 2015

I, the undersigned, give permission on behalf of Los Angeles County Metropolitan Transportation Authority (LACMTA), for research to take place near rail entrances and/or LACMTA property from January to May 2015.

UCLA students will conduct anonymous surveys to transit riders using Metro Rail as they enter or exit transit stations. The survey process takes no longer than 5 minutes. The survey results will be pooled for the project and individual results of this study will remain absolutely confidential and anonymous. Should this study be published, only pooled results will be documented. No costs will be incurred by either LACMTA or the individual participants.

Let this serve as an official letter of permission acknowledging consent and permission from the Los Angeles County Metropolitan Transportation Authority. If there are any questions, please contact Jeff Boberg at bobergj@metro.net or Matthew Kridler at 213-922-7649 or kridlerm@metro.net.


Jeff Boberg, Transportation Planner
Bobergj@metro.net

30 January 2015
Date

Appendix 2.5 UCLA Transit Use Survey (Spanish)

UCLA Transit Use Survey

PROPORCIONANDO RESPUESTAS A LA ENCUESTA ES VOLUNTARIO. TODA LA INFORMACION ES CONFIDENCIAL

1. ¿De qué tipo de lugar VIENES AHORA mismo? (Por favor marque uno):
 - Trabajo /negocios
 - Casa
 - Compras
 - Otro (especifique): _____
 - Escuela
 - Servicios médicos / de salud
 - Social / familia
2. ¿A qué tipo de lugar VAS AHORA mismo? (Por favor marque uno)
 - Trabajo /negocios
 - Casa
 - Compras
 - Otro (especifique): _____
 - Escuela
 - Servicios médicos / de salud
 - Social / familia
3. El lugar de donde viene o ¿ donde va, ¿esta a 10 minutos en pie (½ milla) de esta estación de tránsito?
 - Sí
 - No
4. ¿Qué has usado más en el último mes?
 - Bicicleta
 - Taxi
 - Vehículo personal
 - El transporte público (autobús, tren, etc.)
 - Caminar
 - Otro (especifique): _____
5. ¿Por cuánto tiempo ha utilizado el Metro Rail (Blue, Green, Red, Purple, Gold, o Expo)?
 - 5 años o más
 - 2-5 años
 - 1-2 años
 - 6-12 meses
 - Menos de 6 meses
6. En promedio, cuántos días por semana usas el Metro Rail (Blue, Green, Red, Purple, Gold, o Expo)?
 - 5 días o más
 - 3-4 días
 - 1-2 días
 - Menos de una vez a la semana
 - La primera vez que uso Metro Rail
7. ¿Tiene una licencia de conducir?
 - Sí
 - No
8. ¿Podría haber hecho este viaje en coche el día de hoy?
 - Sí
 - No
9. ¿Cual es su edad?
 - 18-24
 - 25-34
 - 35-49
 - 50-64
 - 65 o más
10. ¿Cual es su origen étnico?
 - Blanco
 - Negro o Africano Americano
 - Hispano o Latino (especifique): _____
 - Asiático (especifique): _____
 - Otro (especifique): _____
11. ¿Cuál es el grado más alto de educación completada?
 - No ha completado ningun grado
 - Menos de un diploma de escuela preparatoria
 - Escuela preparatoria
 - Un poco de universidad / grado asociado
 - Licenciatura
 - Título avanzado
12. ¿Cuál fue su ingreso anual individual en 2014 antes de impuestos?
 - Menos de \$15,000
 - \$15,000-\$34,999
 - \$35,000 - \$49,999
 - \$50,000 - \$74,999
 - \$75,000 o más
13. Por favor proporcione el código postal de su dirección actual:

Gracias por su participación en esta encuesta!

加州大學洛杉磯分校公共交通使用情況調查

該調查的填寫完全自願。所有信息都會被保密

-
1. 您現在剛從那種地方過來? (請選擇一個)
- 工作/生意 學校
 家裡 醫院/醫診室
 商場/購物 社交/家庭聚會
 其他 (請描述): _____
2. 您現在正準備去往那種地方? (請選擇一個)
- 工作/生意 學校
 家裡 醫院/醫診室
 商場/購物 社交/家庭聚會
 其他 (請描述): _____
3. 您來或去的地方可以步行十分鐘 (0.5英里) 到車站嗎?
- 可以 不可以
4. 過去這一個月, 下面哪種交通方式您使用的最多?
- 單車
 的士
 私家車
 公共交通 (即: 巴士, 輕軌, 地鐵)
 步行
 其他 (請具體說明): _____
5. 您使用 Metro 列車多久了 (藍線, 綠線, 紅線, 紫線, 金線, 或 Expo 線)?
- 5 年或以上
 2-5 年
 1-2 年
 6-12 月
 少於 6 個月
6. 您平均每星期多少天使用 Metro 列車 (藍線, 綠線, 紅線, 紫線, 金線, 或 Expo 線)?
- 5 天或以上
 3-4 天
 1-2 天
 少於一星期一次
- 第一次乘坐 Metro 列車
7. 您有駕駛證嗎?
- 有 沒有
8. 這次行程您本可以使用汽車的嗎?
- 可以 不可以
9. 您的年齡在?
- 18-24
 25-34
 35-49
 50-64
 65 及以上
10. 您的種族是? (請選擇所有符合的)
- 白人 (非西班牙裔)
 黑人或者非洲裔美國人
 西班牙裔或拉丁美洲裔
 亞裔人士
 其他 (請具體說明): _____
11. 您完成的最高學歷是?
- 無受教育
 低於高中文憑
 高中文憑
 大專文憑
 本科教育
 更高等教育
12. 請問 2014 年稅前的個人年收入是?
- 低於 \$15,000
 \$15,000-\$34,999
 \$35,000-\$49,999
 \$50,000-\$74,999
 \$75,000 及以上
13. 請提供您現在住址的郵編:
- _____
-

謝謝您的參與!

Appendix 2.7 Surveyor Guide

Please DO NOT PASS the fare gates. The class does not have permission from Metro to survey within the fare gates.

Preparation/Materials:

- Numbered surveys
- Metro consent letter
- UCLA consent letter
- Clipboard and pen(s)
- ‘Master list’
- Folder to put completed surveys in
- Name badge with UCLA logo

What to wear:

Please dress appropriately for conducting surveys as you are representing UCLA.

- (Optional) UCLA gear (no headgear including beanies, hats, visors, etc.)
- No shorts or short skirts
- No offensive graphics or words

Script:

Hi, my name is _____. Do you have a few minutes to take a survey on your transit use?

(If participant says “Yes”)

Hand the participant the clipboard and a pen

Thank you. Remember that everything you answer is completely voluntary and confidential.

If you have any questions about the survey, please let me know.

(Participant takes survey)

*(At the end of the survey) *smile** Thank you so much for your time and participation. Have a good day.

****Fill out sections “For Internal Purposes Only”****

Notes:

If the participant wants you to conduct the survey verbally: at the last question about income, ask the participant to POINT to their income so they do not have to say it aloud.

If the participant asks what the survey is about: The results of this transit survey will inform a larger study about the relationship between transit oriented developments and neighborhood change.

- If the participant asks what transit oriented development is: Transit-oriented development is residential and business development around rail (transit) stations.

- If the participant asks what kind of neighborhood change: Residential and business transitions.

If the participant asks if the results of the survey was be published: The results of this survey will pool information from all the surveys gathered. None of your individual answers will be disclosed.

If the participant asks to see consent letter/asks for a copy: let the participant read the consent letter and offer to email them a copy or mail them a copy (write the participant's information on your master list, not on the survey)

Thank you for your help with transit survey data collection. Please make sure you complete the Transit Survey Collection Times Google Form when you complete your time on the field.

Appendix 2.8 Transit Survey Collection Data Form

5/31/2015 Transit Survey Collection Times [Edit this form](#)

Transit Survey Collection Times

* Required

What is your name? (first name and last initial please) *

What time did you collect surveys? Peak/Off peak/Weekend *
Identify time in to time out

5am-9am Peak (Mon-Fri)
 9am-3pm Off-Peak (Mon-Fri)
 3pm-7pm Peak (Mon-Fri)
 7pm-10pm Off-Peak (Mon-Fri)
 Weekend

What is the date that you surveyed? *

What station did you go to? *

Mariachi Station Plaza (Gold Line)
 USC/Vermont Station (Expo Line)
 Hollywood/Western Station (Red Line)
 Highland Park (Gold Line)
 103rd St/Watts Tower (Blue Line)
 Chinatown (Gold Line)

How many surveys did you collect? *

https://docs.google.com/forms/d/1Kc4j3p1j43ZGKdXdy18Nj22q04_poXLV04D53tL/viewform 1/2

5/31/2015 Transit Survey Collection Times

Observations - anything the survey group should know (ex: more men than women)

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Appendix 2.9 Number of Surveys Collected Per Metro Station

103rd Street/Watts Tower	Chinatown	Expo/Vermont	Highland Park	Hollywood/Western	Mariachi Plaza
111	102	106	119	104	122
Total surveys collected: 664					

Appendix 2.10 Metro Average Daily Boardings and Alightings (2014 Fiscal Year)

<u>Station:</u>	<u>Weekday</u>	<u>Saturday</u>	<u>Sunday</u>	<u>Percent Week Share</u>
103rd Street/Watts Tower	7,052	4,767	3,879	22%
Hollywood/Western	10,290	7,855	5,092	32%
Mariachi Plaza	1,881	1,185	1,292	6%
Chinatown	3,166	2,792	2,876	11%
Highland Park	4,949	3,002	2,670	15%
Expo/Vermont	4,780	3,669	2,279	15%

CHAPTER 3: TOD IMPACTS ON THIRD PLACES

Introduction

This chapter examines the impact of transit-oriented development (TOD) on local businesses through the lens of third places— public spaces with a retail and social component. Specifically, this chapter examines coffee and donut shops using multiple field methods: a customer survey, an observational study, and a business owner survey. These methods aim to understand how rail transit affects TOD commercial corridors by examining the differences among third places around six Los Angeles Metro rail stations. Specifically, this section will address one primary research question: *How does rail transit affect the commercial corridor?*

Through these methods, we find that commercial investment in the case study neighborhoods ranges. Neighborhoods with high commercial investment have lots of chain businesses, whereas in neighborhoods with little commercial investment local entrepreneurs fill the gap. Secondly, we find that the changes taking place in these communities involve more non-local customers, higher prices, and more specialty items. However, we find that ethnic markers remain strong in even changing commercial districts. Lastly, a comparison of the characteristics of new and longer-term neighborhood residents near rail transit shows that established residents are older, predominately Latino, and more likely to shop locally. Conversely, newer residents are typically younger, more likely to be Non-Hispanic White or Asian, and are less likely to shop locally.

Based on these findings, we recommend the adoption of a holistic community development approach that is inclusive of the commercial sector, and considerate of the context of the commercial district, and the value of community-serving retail. Specifically, community developers should:

- Recognize the commercial corridor as an important arena of neighborhood change
- Acknowledge and preserve the diversity of TOD commercial districts
- Prioritize protection of community-serving retail

Background

This section summarizes findings from the existing literature on commercial gentrification and third places. We define key terms related to gentrification. Subsequently, we explore the economic and social significance of third places.

Commercial Gentrification

The process of commercial gentrification results in the loss of a community-serving commercial corridor. Rising real estate values drive both residential and commercial gentrification and displacement. Speculators buy, often rehabilitate, and then sell properties in a process known as “flipping.” Commercial gentrification is often associated with high commercial investment through the arrival of chain businesses, bringing with them homogenization and rising rents (Bloom, n.d.). Immergluck’s (1999) analysis on commercial building activity in Chicago during the 1980s, indicates that areas with dense population, high median incomes, low poverty rates, and lower percentages of black and Hispanic residents were key determinants in higher levels of commercial investment.

The arrival of chain businesses and the loss of small, community-serving businesses have important economic and social implications for a neighborhood. First, rising rents can displace existing small businesses that serve long-term, lower-income residents. These small businesses symbolize entrepreneurship, which is a key to moving people out of low-wage jobs and into the middle class (US Small Business Administration, n.d.). Second, small businesses have greater economic multiplier effects than chain businesses. That is, dollars spent at small businesses are more likely to be re-spent in the local economy (“How Important Are Small Businesses to Local Economies?,” n.d.).

Moreover, a recent study by Bolzoni (2014) suggests that gentrification of commercial space should not just be seen as markers of change, but as active agents of change—where the legitimacy of uses, images, and users is constantly contested and negotiated. In other words, these changing spaces are a live battleground where symbolic ownership is determined. The preservation of small businesses is important to the local economy and neighborhood character, but may be vulnerable to gentrification. Research on commercial gentrification suggests that merchant associations are key mechanisms with potential for strengthening small businesses’ abilities to deliver support services, participate politically, and organize a unified mission (Sutton, 2010).

A study by Ong, Pech, and Ray (2014) actually tests the relationship of TOD and commercial gentrification in Los Angeles. It looks specifically at small, ethnic businesses in four Los Angeles Asian-American enclaves. The study finds that overall local Asian businesses did not proportionately benefit from development. In most neighborhoods, this

sub-sector lagged in growth. The study suggests more governmental action to maintain neighborhood culture and to support small local and ethnic businesses. TOD and gentrification are important topics for local business owners and there are opportunities for policy intervention.

Third Places

This chapter focuses on third places, which are retail spaces with economic and social significance. Calhoun (1993) defines third places as spaces outside the home and work where individuals go to escape or socialize. He suggests that they are an important building block for civil society, social capital, and place making. They are unique because they serve a public purpose, but are owned and managed by the private sector. Furthermore, their form—ambiance, products, and prices—are flexible and highly dependent on their clientele. Coffee and donut shops have similar functions, but generally differ in form.

Coffee and donut shops typically serve similar products: coffee drinks and baked (or fried) goods. However, coffee shops, especially the rise of specialty coffee shops, have come to symbolize gentrification. For example, anti-gentrification activists targeted the new coffee shop Bowtruss Coffee Roasters in Chicago's Pilsen neighborhood. Activists hung signs that read, "Fresh roasted gentrification served here" (Schmich, 2015). Also, researchers have used the prevalence of coffee shops as a proxy for gentrification (Papachristos, Smith, Scherer, & Fugiero, 2011). Coffee shops are symbols of gentrification to the general public, as well as to research.

Recent studies by Cheng et al. (2014) and Rascoff and Humphries (2015) provide concrete evidence directly linking coffee shops and gentrification. Cheng et al. creates a gentrification index based on median household income, median rent, percent of persons with a bachelor's degree or higher, and the percent of Non-Hispanic White population. They find that new Starbucks are three times more likely to be established in or near gentrifying areas than in other neighborhoods. Rascoff and Humphries compared Starbucks locations to home values and found that Starbucks is not only correlated with rising home values, but that Starbucks fuels the rise. While properties near Starbucks often start out more expensive, after the opening of the coffee giant in the neighborhood, home values appreciated at even faster rates than before. Starbucks, the global leader of coffee shops, is clearly linked to gentrification.

While coffee shops symbolize and can even catalyze gentrification, donut shops are a substitute. However, donut shops are not typically associated with gentrification. Their products are generally cheaper, their design is generally more modest, and they are largely independent and family-operated (Nichols, n.d.).

Independent donut shops are popular in the region. There are about 1,500 independent donut stores throughout the state (Nichols, n.d.), and in Los Angeles County, donut shops outnumber Starbucks stores. Independent donut shops have a unique history in Southern California. They are largely run and operated by Cambodian immigrants, a largely refugee population which has found its niche in donut stores ("Why are most donut outlets in California run by Cambodian-Americans?," n.d.). In late 2014 this independent donut culture was threatened by the re-introduction of Dunkin' Donuts to the

region. Dunkin' Donuts, the Boston-based Corporation controls more than half of the national donut market, but had not been able to break into the largely independent west coast market. They attempted to in the 1980s, but by 2002 closed all their operations in the area (Nichols, n.d.). Even now with the recent opening of six Dunkin' Donuts outlets in Southern California, independent donut shops not only prevail, but dominate the market.

The literature suggests that while coffee shops and donut shops both act as third places to some residents— coffee shops tend to reflect the consumption patterns of more affluent consumers. The presence, opening, and closure of either of these reflect changing values, clientele, and neighborhoods. As described in the next section, this study observes coffee and donut shops and surveys customers to understand the depth of commercial gentrification.

Methodology

To understand how transit-oriented development (TOD) might affect commercial gentrification this study utilizes a customer survey, an observational exercise, and a business owner survey. These research approaches serve different, but complementary purposes. All three approaches focus on third places, specifically coffee shops and independent donut shops. The customer survey aims to identify the demographics of consumers and to highlight relationships between individuals' residency, shopping habits, and third place preferences. The observational exercise provides a more thorough understanding of the differences between coffee and donut shops by documenting nuanced characteristics of each venue. Although we were only able to collect one

business owner survey, this instrument helps us to understand owners' perspectives and concerns of neighborhood change. While not all three instruments were used at each establishment, at the very least, the three instruments provided the research team with options for collecting data. The multi-pronged approach contributes to a holistic understanding of the experience of the third place sector.

Key Research Questions

These methods are designed to answer the following key questions regarding commercial gentrification in TOD neighborhoods:

1. What is the depth of neighborhood change occurring in the commercial corridor within TOD neighborhoods?
2. Who are the retail consumers in TOD neighborhoods?
3. Who are the customers of established, neighborhood-based businesses?

Research Design: Overview and Procedures

The study focuses on coffee and donut shops within a half-mile of each transit station. We operationalize coffee shops as any retailer that primarily sells coffee (including chains such as Starbucks) and represent commercial gentrification. Independent donut shops are non-chain retailers that primarily sell donuts. We use ethnic bakeries, such as Latino panaderias, as a comparable substitute for donut shops since they are similar in ownership structure, products, and prices.

We developed the final research design after an initial attempt to survey a representative sample of all business owners in the areas. We had difficulty identifying eligible businesses and getting business owners to participate. As a result of that

experience, we revised our methodology to focus on only coffee and donut shops. In this methodology, we did not select the coffee and donut shops prior to visiting the neighborhoods. Instead, surveyors explored each neighborhood on foot by walking on the streets adjacent to the station.

We prioritized streets directly adjacent to the station because we expect these streets to be most affected by TOD. The first coffee shop, donut shop, or ethnic bakery found was selected for the study. If neither type of establishment was found, surveyors referred to the list of prepared coffee shops within a half-mile radius, compiled from Yelp.com. Whenever possible, we utilized the original business owner survey, but expanded it to include managers and employees as well.

Surveyors were instructed to collect a minimum sample size of ten surveys and one observational exercise, per coffee or donut shop. Since coffee shops indicate the forefront of commercial gentrification, the absence of a coffee within the half-mile is considered an indicator, suggesting that little change is occurring. In contrast, the absence of a donut shops suggests that the neighborhood may be experiencing new investment and neighborhood change.

The following materials were needed for conducting fieldwork:

- UCLA cover letter
- Internal surveyor guide
- Surveys (in English and Spanish)
- Observational instrument

Terms Defined

The following defines important terms and indicators of the study:

- Coffee shops: A retailer that primarily sells coffee. This includes chains, such as Starbucks.
- Community-serving (store): A retailer that targets local resident demographics, specifically. This may be characterized in a variety of ways, including but not limited to low prices or ethnic products.
- (Independently-Owned) Donut shops: A retailer that primarily sells donuts and is recognized as a local establishment. This does not include chains. The study recognizes ethnic bakeries as a comparable substitute for donut shops since they are similar in ownership structure, products, and prices.
- Established Residents: Residents that moved into a given neighborhood before or during 2004.
- Other Residents: Residents that do not currently live in a neighborhood.
- Newer residents: Residents that moved into a given neighborhood during of after 2005.

Customer and Business Owner Survey Development

See Appendix for survey instrument. We consulted existing surveys to develop the instrument, including a survey developed by UCLA students of Walmart customers in Los Angeles's Chinatown (2014), and the 2013 American Community Survey (ACS, 2013). The survey was tested twice prior to data collection (see Appendix: Customer and Business Owner Beta Testing). Additionally, all surveyors were trained on the customer and business owner survey protocol on April 15, 2015.

Observational Instrument Development

See Appendix for observational instrument. We referred to the study's groundtruthing instrument and adopted relevant questions (see Chapter 4 Change in the Built Environment). The observational instrument was tested once prior to data collection (see Appendix: Observational Instrument Beta Testing). Additionally, we trained surveyors on the protocol on April 15, 2015 (see Appendix: Observational Instrument Training).

Sampling and Data Collection

Fifteen UCLA master's students collected data using the surveys and observational instruments in Spring 2015. We collected a total of 61 customer surveys, completed ten observational exercises and three business owner/manager surveys at five coffee shops and five donut shops (see Table 3.1). Surveyors used the previously discussed methodology, and potential participants for the customer survey were chosen as they entered or exited selected venues. To be eligible for the customer survey, participants were required to live in Los Angeles. We aimed to survey Los Angeles residents exclusively, in order to examine the movement of residents between and among local neighborhoods.

Table 3.1: Surveys Collected

Station	Coffee Shop		Donut Shop	
	Groundtruthing	Customer Surveys	Groundtruthing	Customer Surveys
103rd/Watts Towers	N/A	N/A	✓	✓
Hollywood/Western	✓	✓	N/A	N/A
Highland Park	✓	✓	N/A ¹	N/A ¹
Chinatown	✓	✓	✓	✓
Mariachi Plaza	✓	✓	✓	✓
Expo Vermont	✓	✓	✓	✓
<p>1. Surveyors were unable to thoroughly explore the Highland Park neighborhood for donut shops near the transit station, due to time constraints. Thus, the absence of groundtruthing and customer surveys do not necessarily reflect an absence of donut shops in the area.</p>				
<p>Source: Data from UCLA Equitable TOD Study 2015</p>				

Limitations

It is important to recognize the various limitations of this methodology. The greatest constraint was time. We had less than three weeks to coordinate and complete surveying and the observational study at the six stations. Consequently, the final research design targeted a small sample size of ten surveys, per venue. While we planned to survey around all six stations, our lack of time prevented us from comprehensively walking the Highland Park area. So, we were unable to search for a local donut shop (or ethnic bakery) around this neighborhood.

Additionally, due to surveyors’ mixed availabilities, the data was collected at different times throughout the day. This was both an opportunity and a limitation. This scheduling enabled us to collect data on different days and at different times, thus surveying a wide range of customers. Weekday afternoons may exclude particular

demographics such as individuals who work day jobs and individuals pursuing their education; conversely, it is more likely that individuals working nights and retired persons will visit these shops during these hours. We recognize, however, that particular days and times, such as mornings and weekends, may be busier than others for coffee shops and donut shops.

Furthermore, these methods do not yield a representative sample of the areas. An observer's one-time experience at a single location is not representative of the entire neighborhood. Also, we recognize that while some items were objective observations, such as the prices of coffee and presence of specialty items, others were more subjective, such as ratings of cleanliness and building appearance. Importantly, referencing Yelp.com for coffee and donut shops in the neighborhoods has limitations. As a website, Yelp tends to favor new, trendy businesses whereas small neighborhood-based businesses may not be on the website.

Lastly, we based two indicators (Residency Type and Pre-Rail shopping) on time, which created a limitation in the analyzing the relationship between the two. We characterized Established Residents as having moved to the area during or before 2004, and Newer Residents as having moved into the area during or after 2005. Problematically, Newer Residents describes individuals that moved into an area after the opening of rail for Watts Tower (1990), Chinatown (2003), Highland Park (2003), and Hollywood Western (1999), but could possibly include people that lived in the area prior to the opening of rail for Mariachi Plaza (2009) and Expo/Vermont (2012) since these two stations opened after 2005. Therefore, the analysis of shopping habits before and after the opening of rail stations, by residency types was not perfect.

Data Analysis

Based on our findings, we found that commercial investment in TOD neighborhoods ranges from high to low. Hollywood/Western and Expo/Vermont stations exemplify high commercial investment, while 103rd Street/Watts Towers Station exemplifies low investment. Secondly, we compared the coffee and donut shops to analyze the depth of retail change taking place near rail transit stations. We find that the changes taking place in these communities involve more non-local customers, higher prices, and more specialty items. However, we find that ethnic markers remain strong in even changing commercial districts. And lastly, we found differences in demographics and shopping habits among established residents and new residents, as well as among local and non-local customers.

Investment in Commercial Corridors

The ownership structures and target clienteles of third places suggest that commercial investment ranges in TOD neighborhoods. Hollywood/Western and Expo/Vermont stations exemplify commercial corridors with high investment, whereas 103rd Street/Watts Towers station exemplifies a commercial corridor with low commercial investment.

The Starbucks and Boba Loca stores surveyed at the Hollywood/Western and Expo/Vermont stations reflect chain, corporate ownership. These chain coffee shops are in line with the surrounding businesses, most of which are also chain businesses and big box retailers, such as Marshall's, Ralph's, and Jamba Juice at Hollywood/Western, and Smart & Final, Taco Bell, and SuperCuts at Expo/Vermont. It is likely that the

commercial rents in these areas are high, as corporate retail capital increases rents (Bloom, n.d.).

Chain businesses also have an ambiance of homogeneity and formality. Chains like Starbucks and Boba Loca take measures to ensure that consumers' experiences are the same regardless of location. For example, Starbucks and Boba Loca staff wear a distinct uniform and use specific marketing and logos on their products. One surveyor described Starbucks' ambiance as "corporate." These measures homogenize commercial space and formally differentiate staff from customers, limiting casual encounters between staff and customers. This homogenization and formality overlooks neighborhood character but may fit with specific segments of the customer base.

Carroll and Torfason's (2011) suggest that homogenization works for chain businesses because they are usually supported by communities with a non-local customer base. Hollywood/Western and Expo/Vermont's chain businesses may be targeting specific non-local submarkets. Hollywood/Western is a busy transit hub with lots of foot traffic. Chain businesses may be targeting the commuters. In the Expo/Vermont neighborhood, University of Southern California (USC) students are part of the customer base. Although individual students have a short tenure in the neighborhood, as a group they are a consistent customer base. Although these stations experience high commercial investment, we find that the TOD neighborhood around 103rd Street/Watts Towers has not.

However, 103rd Street/Watts Towers station's experience suggests that rail investment does not necessarily ensure high commercial investment. While there were no

coffee shops in the area, we focused on a Black-owned donut shop. Although there were some chain stores in the area, such as a major grocer and fast food outlets, a number of stores in the shopping center, such as a discount store and nail salon, appeared to also be independently owned and operated. These independent retailers suggest that small, local, and minority entrepreneurs may be filling in the gaps in neighborhoods with low corporate investment. Locals, especially people of color, face challenges to establishing a business (Bates, Jackson, & Johnson, 2007). However, neighborhoods with low corporate retail investment may present opportunities such as vacancies, low rents, and unmet needs for new, local, and minority entrepreneurs to capitalize upon. Although TOD does not automatically trigger commercial development, community entrepreneurs may be filling in that gap. Furthermore, these community entrepreneur-owned businesses may encourage community interaction more than chain retailers.

Although we were unable to survey customers, our observations suggest that the customers knew each other and the employee on a first-name basis. This observation is supported by an interview with the employee, who is the owner's grandson, in which he stated that a majority of the customer base is made up of local residents. The local, minority-owned donut shop serves an important social purpose for local residents.

Although our findings suggest that little commercial investment is occurring in the area, the surveyed employee indicated that the owner of the donut shop has been experiencing moderate rent increases during the past few years. With new high-end developments, such as the planned Frank Gehry-designed youth center (Miranda, 2014) and celebrity chef Roy Choi's Loco'l restaurant coming to Watts (Kahn, 2015), rising

land values may be a concern for neighborhood institutions like this donut shop, in the future. This TOD neighborhood experiences low commercial investment and holds opportunities for local and minority entrepreneurs now. However, developers and corporate retailers may soon realize the economic potential of these TOD neighborhoods. Commercial gentrification may become a serious concern in the near future.

Depth of Change

When we compare coffee shops to donut shops across all stations, we gain insight on the nature of neighborhood change in commercial corridors. We find that this change can include higher prices and more specialty items. We looked at a single item, a medium drip coffee, and found that across all stations, this item was more expensive at coffee shops than donut shops. We found that coffee shops often serve specialty coffee, such as lattes, with specialty ingredients, like chai. Most of the donut shops we surveyed had limited menu offerings. Although specialty items may not have immediate, serious consequences, some may view the introduction of specialty items as changing the character of the neighborhood. Changes like more specialty items might seem superficial, but higher prices and non-local clientele are serious concerns for existing long-term, permanent residents.

Table 3.2: Price of a Regular Medium-Sized Drip Coffee

Station	Year Station Opened	Coffee Shop	Donut Shop
Watts Towers/103rd	1990	N/A	\$1.25
Hollywood/Western	1999	\$2.10	N/A
Highland Park	2003	N/A	N/A
Chinatown	2003	\$3.00	\$2.50
Mariachi Plaza	2009	\$1.95	\$1.75
Expo/Vermont	2012	\$2.15	\$1.25

Source: Data from UCLA Equitable TOD Study 2015

Importantly, we find that neighborhood change does not necessarily mean a loss of ethnic character. Ethnic markers, evidence that the retailer is catering to or representing a specific ethnic culture, are present at both coffee and donut shops. Stores near the Highland Park, Chinatown, and Mariachi Plaza stations had ethnic names, signage in a language other than English, and ethnic foods. While ethnic markers like signage suggest that the shop is catering to a non-English speaking community, other markers like ethnic names and food could be used for marketing purposes. Some shops may be attempting to harness cultural tourism to attract customers. While cultural tourism may not be directly harming local residents' livelihood, cultural tourism may have negative impacts on preserving distinct cultural identity (Besculides, Lee, & McCormick, 2002). The depth of change exemplified by this comparison of coffee and donut shops ranges from inconsequential, like specialty items, to serious concerns for long-term, permanent residents.

Summary of Customer Survey Findings

This section presents the main findings of the customer surveys. Analyses of the coffee and donut shop customer surveys indicate that:

1. Established Residents are older and more likely to be Latino than Newer and Other Residents
2. Established Residents support local businesses more than Newer Residents, and Newer Residents support local businesses more than Other Residents
3. Non-local residents predominately visit coffee shops over donut shops.

The subsequent sections explore demographic differences among residency types, shopping differences among residency types, and third place categories among residency types.

Demographic Differences Among Residency Types

This section examines the relationship between residency type and age, race/ethnicity (for descriptive summaries of the customer' demographics, see Appendix: 3.1 – 3.3). Findings indicate that there are demographic differences among the categories of Established, Newer, and Other Residents. Mainly, Established Residents are primarily older than 50 years old, whereas Newer and Other Residents predominately belong to the 25 to 34, and 25 to 49 years old age categories (see Table 3.3). Additionally, Established Residents are almost entirely Hispanic/Latino, with no individuals identifying as Black or Asian, and only one (1) identifying as White (Non-Hispanic). Importantly, this suggests that people moving into the neighborhood (within the last ten years) and people coming in from outside areas, differ from the longer-term residents.

Table 3.3 Demographic Characteristics of Residency Types

A. Age Category						
	Established Resident		Newer Resident		Other Resident	
	Frequency	% of Total Resident Category	Frequency	% of Total Resident Category	Frequency	% of Total Resident Category
Under 24	4	24%	3	27%	7	21%
25 - 34	3	18%	6	55%	14	42%
35 - 49	3	18%	2	18%	10	30%
50 +	7	41%	0	0%	2	6%
Total	17	100%	11	100%	33	100%

B. Race/Ethnicity						
	Established Resident		Newer Resident		Other Resident	
	Frequency	% of Total Resident Category	Frequency	% of Total Resident Category	Frequency	% of Total Resident Category
White (Non-Hispanic)	1	6%	3	27%	7	21%
Black	0	0%	1	9%	4	12%
Hispanic/Latino	15	94%	5	45%	14	42%
Asian	0	0%	2	18%	8	24%
Total	16	100%	11	100%	33	100%

Source: Data from UCLA Equitable TOD Study 2015

Specifically, seven of the 17 Established Residents, or 41 percent, are over the age of 50, whereas individuals in this age category comprise only 15 percent of total surveyed people (see Appendix 3.2). This discrepancy highlights that the distribution of Established Residents over 50 years old is relatively large. Conversely, of those surveyed, there are no Newer Residents over the age of 50 years. Rather, the largest age group for Newer Residents surveyed is the 25-34 years old category: six of the 11 Newer Residents (55 percent). However, this age category only comprises 38 percent of the total survey sample, thus indicating that this age group composes a relatively large percent of Newer Residents.

Although the Other Resident category most closely corresponded with the overall sample age distribution, it had higher percentages for 24 to 34 year olds, and 35 to 49

year olds, 42 percent compared to 38 percent, and 30 percent compared to 25 percent, respectively. Only two individuals in this category were over 50 years old.

Approximately 94 percent of Established Residents identified as Hispanic/Latino, a larger proportion compared than the total sample. Of those surveyed, six percent identified as Non-Hispanic White, a smaller proportion compared to the total sample percentage. No Established Residents identified as Black or Asian. In contrast, Asian and White comprised substantial proportions of Newer Residents (18 percent and 27 percent, respectively) and Other Residents (see Table 3.3).

Shopping Differences Among Residency Types

We examined the difference in shopping habits between current local residents and those who do not live in the neighborhood. A majority of the shoppers we surveyed reported that they do additional shopping in the area. However, of the groups surveyed, non-local individuals were the least likely to do additional shopping in the area. Only 60 percent of non-locals do additional shopping in the area, compared to 88 and 82 percent of Established and Newer Residents respectively (See Table 3.4). Data indicate that Established Residents support local businesses the most, followed by Newer and Other Residents.

This may be because Established Residents generally have the strongest ties to local shopping since these residents have been living in these areas the longest, whereas Newer Residents might feel less connected and familiar with the neighborhood. Newer Residents' might prefer to still shop at stores in or nearer to their previous neighborhoods. Other (non-local) Residents would be more likely to do most shopping

near where they live, due to convenience. Overall, about 28 percent of surveyed individuals reported that they did not do additional shopping in the area.

Established Residents are the group most likely to shop in the neighborhoods even before the opening of the rail station (see Table 3.4). Newer and Other residents followed at 64 percent and 33 percent respectively. This can perhaps be attributed to the fact that Established Residents had a greater chance of living in these areas prior to the rail station opening.

Table 3.4: Shopping Habits of Residency Types

A. Additional Shopping in Neighborhood								
	Established		Newer		Other		Total	
	% of Total Resident		% of Total Resident		% of Total Resident		% of Overall	
	Frequency	Category	Frequency	Category	Frequency	Category	Frequency	Total
Yes, Additional Shopping	15	88%	9	82%	18	60%	42	72%
No Additional Shopping	2	12%	2	18%	12	40%	16	28%
Total	17	100%	11	100%	30	100%	58¹	100%
B. Shopping Pre-Opening of Rail Station								
	Established		Newer		Other		Total	
	% of Total Resident		% of Total Resident		% of Total Resident		% of Overall	
	Frequency	Category	Frequency	Category	Frequency	Category	Frequency	Total
Yes, Shopped Before Rail Opened	14	82%	7	64%	11	33%	32	52%
No, Did Not Shop Before Rail Opened	3	18%	4	36%	22	67%	29	48%
Total	17	100%	11	100%	33	100%	61	100%
1. Three respondents chose not to answer this question, resulting in a total of 58. The study's total survey sample size was 61.								
Source: Data from UCLA Equitable TOD Study 2015								

Third Place Categories of Residency Types

Studying the Residency Types and Third Place Categories provides deeper insight about which type of retailer may be drawing in more outsiders and which may cater more to local residents. Other Residents comprised the largest customer group of Coffee shops with 24 individuals compared to 12 Established and 10 Newer Residents (see Table 3.5).

We also examined whether coffee or donut shops comprised a higher percentage of Other Residents’ third places, since these residents were the least likely to do additional neighborhood shopping. Data indicate that 73 percent of the polled Other Residents were customers at coffee shops with only 27 percent being customers at donut shops. The finding that the majority of Other Residents were found supporting coffee shops, or commercial gentrification, reiterates that such venues attract and cater to non-local demographics.

Additionally, while donut shops illustrated lower percentages as third places for all Residency Types, Established Residents have the highest proportion of individuals visiting donut shops, approximately 29 percent. Conversely, Newer Residents have the highest proportion of individuals visiting coffee shops, about 91 percent.

Table 3.5: Third Place Categories of Residency Types

Third Place Category	Established		Recent		Other	
	Frequency	% of Total Resident Category	Frequency	% of Total Resident Category	Frequency	% of Total Resident Category
	Coffee Shop	12	71%	10	91%	24
Donut Shop/Bakery	5	29%	1	9%	9	27%
Total	17	100%	11	100%	33	100%

Source: Data from UCLA Equitable TOD Study 2015

Data analysis of the coffee and donut shop customer surveys reveal differences in demographics and shopping habits among the various residency types, thus indicating that people coming into the neighborhoods differ in age and race/ethnicity from long-term residents. First, Established Residents are generally older than Recent and Other

Residents. Additionally, Recent and Other Residents have higher compositions of individuals that identifying as being of White or Asian ethnicities.

Furthermore, analysis highlights that coffee shops comprise a greater percentage of third places than donut shops, for Other Residents. Interestingly, Other Residents are the least likely to do additional local shopping, whereas Established Residents did the most additional neighborhood shopping. Differences in shopping habits and third place predominance may be related to the length of residency in the area. Established Residents, having lived in the neighborhood for over ten years, may have stronger ties and increased familiarity with the local shops compared to Recent and Other Residents.

Recommendations

Our findings indicate that commercial investment in the case study neighborhoods ranges. Neighborhoods with high commercial investment have lots of chain businesses, whereas local entrepreneurs fill the gap in neighborhoods with little commercial investment. Secondly, we find that the changes taking place in these communities involve higher prices, more specialty items, and more non-local customers. However, we find that ethnic markers remain strong in even changing commercial districts. Lastly, a comparison of the characteristics of new and longer-term neighborhood residents near rail transit shows that established residents are older, predominately Latino, and more likely to shop locally. Conversely, new residents are typically younger, more likely to be Non-Hispanic White or Asian, and are less likely to shop locally. These findings indicate a need for a holistic community development approach that is inclusive of the

commercial sector, the context of the commercial district, and the value of community-serving retail.

Specifically, community developers should:

- 1) *Recognize the commercial sector as an important arena of neighborhood change;*
- 2) *Acknowledge and preserve the diversity of TOD commercial districts; and*
- 3) *Prioritize protection of community-serving retail.*

Recognize the commercial sector as an important arena of neighborhood change

It is well established that TOD can have impacts on the residential sector, but this report shows that TOD can have impacts on the commercial sector as well. Changes in the commercial sector can affect business owners, residents, and new entrepreneurs. Thus government as well as the private sector should adopt commercial stabilization as a community development goal.

Equitable TOD planning is already doing this. Commercial stabilization is a key component of Seattle's Community Cornerstones Initiative for example. The purpose of the three-year, \$3 million HUD grant is to prevent displacement in Southeast Seattle, an area with a new light rail line passing through. The initiative has three goals: assist in acquisition of affordable housing around stations, stabilize and strengthen multicultural commercial districts, and plan for a shared multicultural community center (Carlson, Rouse, & Kleit, 2015). The strategies are used in conjunction with one another. By acquiring land for mixed-use affordable housing, the housing strategy creates opportunities for new local businesses. The initiative shows how commercial strategies

can be integrated with housing-focused strategies to address concerns of gentrification and displacement.

Acknowledge and preserve the diversity of TOD commercial corridors

Commercial diversity is an important component of neighborhood character. Government should acknowledge a neighborhood's existing commercial diversity and work to preserve it.

The City of San Francisco heavily regulates chain businesses to preserve commercial diversity. San Francisco defines chain businesses as “a type of retail sales activity or retail sales establishment that has eleven or more other retail sales establishments in operation, or with local land use or permit entitlements already approved, located anywhere in the world. In addition to the eleven or more other retail sales establishments located in the World, maintains two or more of the following features: a standardized array of merchandise, a standardized facade, a standardized decor and color scheme, a uniform apparel, standardized signage, a trademark or a servicemark” (City and County of San Francisco Planning Department, 2015). By limiting chain businesses through zoning and permitting, San Francisco prioritizes independent businesses and encourages commercial diversity. Campaigns in other cities like Jersey City, New Jersey and New York City are pushing for similar measures (“Why #SaveNYC | #SaveNYC,” n.d.). Land use policies like this may be important in TOD neighborhoods in Los Angeles, especially considering plans for further expansion of light rail in the city.

Prioritize protection of community-serving retail

It is important to attract or support retail that meets the needs of long-term residents and that preserve the neighborhood's character. While many small businesses serve these functions, they are the most vulnerable to rising rents and displacement. To address this, planners should prioritize protection of small businesses and community-serving retail.

Seattle's Community Cornerstone Initiative focuses on the Othello-Graham neighborhood, which has a number of small, independent, minority-owned businesses. The initiative specifically targets small, minority owned businesses for technical assistance. Furthermore, they developed social justice-based measures by which to evaluate the success of the initiative. "One goal is to increase the sophistication of small, often ethnically-owned and -focused, business in the Othello district so they can success as the business climate changes" (Carlson et al., 2015). Proactive measures can be taken to ensure the success of community-serving retail against TOD displacement.

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CHAPTER 3: APPENDICES

Appendix 3.1 Table 3.5

Table 3.5: Summary of Customer Age Distribution

Age Category	Frequency	% of Total
Under 24	14	23%
25 - 34	23	38%
25 - 49	15	25%
50 +	9	15%
Total	61	100%

Source: Data from UCLA Equitable TOD Study 2015

Appendix 3.2 Table 3.6

Table 3.6: Summary of Customer Race/Ethnicity

Race/Ethnicity	Frequency	% of Total
White	11	18%
Black or African American	5	8%
Hispanic or Latino	34	57%
Asian	10	17%
Total	60	100%

Source: Data from UCLA Equitable TOD Study 2015

Appendix 3.3 Table 3.7

Table 3.7: Summary of Residency Types

Resident Category	Frequency	% of Total
Established¹	11	18%
Newer²	17	28%
Other³	33	54%
Total	61	100%

1. Residents that moved to the area during or before 2004.

2. Residents that moved to the area during or after 2005.

3. Residents that do not live in the area.

Source: Data from UCLA Equitable TOD Study 2015

Appendix 3.4 UCLA Coffee/Donut Shop Customer Consent Letter

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



UCLA

SANTA BARBARA • SANTA CRUZ

LUSKIN SCHOOL OF PUBLIC AFFAIRS
6368 PUBLIC AFFAIRS BUILDING
BOX 951656
LOS ANGELES, CALIFORNIA 90095-1656
FAX: (310) 825-8775

13 April 2015

To Whom It May Concern,

UCLA Department of Urban Planning is gathering information on local consumption patterns nearby transit rail stations. Your response is valuable. It will inform the Los Angeles County Metropolitan Transportation Authority (Metro) and the California Air Resources Board (CARB) as the Southern California region considers new transit investment and related new development around transit stations effects on the lives of existing residents, particularly low-income communities of color.

Please be assured that all information gathered through the study will be kept confidential. No individual's name will be directly associated with any specific response. Only summarized group information will be reported in publications or reports. Any information that is obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. You may discontinue participation without penalty. You are not waiving any legal claim or rights because of your participation in this research study.

If you have questions regarding your rights as a research subject, contact the UCLA Department of Urban Planning at the Luskin School of Public Affairs: 3250 Public Affairs Building, Box 951656, Los Angeles, CA 90095. Or alternatively, questions can be answered over the phone at (310) 825-4025. Thank you.

Sincerely yours,

A handwritten signature in black ink that reads "Silvia Jiménez".

Silvia Jiménez
Assistant Director,
Center for the Study of Inequality

Department of Urban Planning
Luskin School of Public Affairs
University of California Los Angeles
3250 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656
Phone: (310) 825-4025

Appendix 3.5 UCLA Coffee and Donut Shop Customer Survey

THIS SURVEY IS COMPLETELY VOLUNTARY. ALL INFORMATION WILL REMAIN
CONFIDENTIAL.

1. How often do you come to this shop?

- ≥ 5 times a week.
- 2 – 4 times a week.
- At least once a week.
- At least once a month.
- Not often at all.

2. Why do you prefer this establishment? (Check all that apply)

- Free wi-fi
- Coffee
- Bakery
- Other (please specify): _____

3. Do you currently purchase other types of goods and/or services in this neighborhood, besides at this establishment?

- Yes (please specify which stores): _____
- No

4. Did you purchase goods and/or services in this neighborhood before the rail opened?

- *Watts Tower (1990)* • *Chinatown (2003)* • *Expo/Vermont (2012)*
- *Highland Park (2003)* • *Hollywood/Western (1999)* • *Mariachi (2009)*

- Yes (please specify the kinds of stores): _____
- No

5. Do you currently live in this neighborhood?

- Yes (please provide the first year of residency): since _____
- No (please provide the zip code of your current address):

UCLA Business Survey

THIS SURVEY IS COMPLETELY VOLUNTARY. ALL INFORMATION WILL REMAIN
CONFIDENTIAL.

6. Race/Ethnicity

- White (Non-Hispanic)
- Black of African American
- Hispanic of Latino (please specify): _____
- Asian (please specify): _____
- Other (please specify): _____

7. Age

- 18-24
- 25-34
- 35-49
- 50-64
- 65 and up

FOR INTERNAL USE ONLY

Survey number: _____

Station Location:

- 103rd Street/Watts Tower
- Chinatown
- Expo/Vermont
- Highland Park
- Hollywood/Western
- Mariachi Plaza

Date/day of week: _____

Time: _____

Interviewer: _____

Sex of participant: _____

Appendix 3.6 UCLA Observational Instrument

Coffee Dispensary: Observational

Observer: _____

Station: _____

Date: _____

Time: _____

1. Type of retailer:

2. Is this establishment (check all that apply):

- Part of a national chain
- Franchised
- Privately Owned

Menu

1. Cost of regular medium drip coffee:

2. Are any of these specialty coffees available (check all that apply):

- Espresso
- Americano
- Cappuccino
- Latte
- Mocha
- Iced Coffee
- Hot Tea
- Iced Tea
- Other:

3. Are any of these specialty ingredients available for coffee drinks (check all that apply):

- White Chocolate
- Mexican Chocolate
- Chai
- Green Tea
- Vanilla
- Peanut Butter
- Organic ingredients
- Other:

4. Describe the to-go container that the coffee comes in:

5. Are mugs available for coffee to drink in the store?

- Yes
- No

6. Other retail items:

Describe any visible front of the house staff

1. How many:

2. Dominant age group:

- Teens
- Young adults
- Middle Aged
- Seniors

3. Dominant Ethnicity:

- White (Non-Hispanic)
- Black
- Latino
- Asian
- Other

4. Gender:

- Women
- Men
- Both

5. Outfit and appearance:

Describe any visible back of the house staff

1. How many:

2. Dominant age group:

- Teens
- Young adults
- Middle Aged
- Seniors

3. Dominant Ethnicity:

- White (Non-Hispanic)
- Black
- Latino
- Asian
- Other

4. Gender:

- Women
- Men
- Both

5. Outfit and appearance:

Describe any visible customers

1. How many:

2. Dominant age group:

- Teens

- Young adults
 - Middle Aged
 - Seniors
3. Dominant Ethnicity:
- White (Non-Hispanic)
 - Black
 - Latino
 - Asian
 - Other
4. Gender:
- Women
 - Men
 - Both
5. Outfit and appearance:

Describe Store Appearance

1. Rate cleanliness:
- 1 – Not clean at all
 - 2- Somewhat clean
 - 3-Clean
 - 4- Very clean
 - 5-Immaculate
2. Seating available:
3. Décor/Theme:
4. Music:
5. Mark all that apply:
- New Construction
 - Recent renovation to unit:
 - 1 – Not visible
 - 2 – Minor Cosmetic
 - 3 – Moderate
 - 4- Extensive
 - Upscale/trendy landscaping
 - Upscale/trendy storefront
 - Upscale/trendy signage, ads, displays
 - Other
6. Indicators of ethnic commercial presence (mark all that apply):
- Non-English language signs
 - Ethnic goods
 - Other:
7. Building appearance relative to surroundings:
- Roughly consistent
 - Out of place – higher end

- Out of place – lower end
- Unable to judge

OPTIONAL: IF THE BUSINESS OWNER CONSENTS TO AN INTERVIEW

1. Do you receive any small business assistance?
- Yes; please specify:
 - No
 - Not sure
2. Why did you select this location for your business? Check all that apply.
- Affordable rent
 - Community
 - Proximity to public transportation
 - Other, please specify:
3. Since the opening of the rail station, which best describes the overall trend of your business?
- Better
 - Stayed the Same
 - Worse
 - Not sure
4. Which ethnicity best describes the business owner?
- White (Non-Hispanic)
 - Black or African American
 - Hispanic or Latino
 - Asian
 - Other, please specify:
5. Please provide the number of paid employees (full-time and part-time) currently working at this business:
6. Who makes up the majority of your customer base?
- Local residents from this neighborhood
 - Other residents

7. Since the opening of the rail station, have any of these characteristics of your customer base changed? Check all that apply.

- Primary language
- Ethnicity
- Age
- Other, please specify:

8. Since the opening of the rail station, have you attempted to attract the business towards a different customer base?

- Definitely
- Somewhat
- Not at all
- Not sure

9. In the near future, are you planning to continue operating your business in this neighborhood?

- Yes, and I think things will get better
- Yes, but I think things will get worse
- No
- Not sure

10. Does the business owner rent or own this space?

- Rent (if rent, please continue)
- Own (if own, please stop here)

11. What was the rent when the business owner moved in to this property?

12. What is the current monthly rent?

13. Over the last 3 years, the rents have:

- Increased significantly
- Increased moderately
- Not changes
- Decreased
- Not sure

Appendix 3.7 Customer and Business Owner Survey Beta Testing

We tested the survey twice prior to data collection. Subsequent revisions were made after the first beta test; edits were made to correct confusing wording and ambiguous questions. At the beginning of each test, the surveyor briefly introduced herself, explained the purpose of the study, and then verbally asked questions. Surveyed individuals were encouraged to provide feedback either during or after completing the survey. The first beta test occurred on April 11, 2015. The survey was conducted on a young man (25-34 years old), sitting in a café in Santa Monica, and took an estimated five minutes to complete. The second beta test occurred on April 12, 2015 and utilized the revised survey. The survey was conducted on another man (35-49 years old) sitting in a café across from the Expo/Vermont rail station in Culver City, and took an estimated two and a half minutes. He clearly understood all of the questions and no revisions were needed.

Appendix 3.8 Customer and Business Owner Survey Training

Surveyors were trained on the survey protocol on April 15, 2015. The training directed surveyors on materials to bring, proper attire, and provided them with a script and answers to potential questions they might encounter in the field. The training session lasted approximately 15 minutes and provided surveyors an opportunity to review the survey instrument, ask questions about survey development and practice administering the survey with each other. Additionally, we reminded surveyors to be aware of their own potential biases when approaching potential participants. Specifically, in order to avoid approaching more people of a particular gender, age category, or race/ethnicity, we

instructed surveyors to approach all customers. Surveyors were also instructed to complete the “For internal use only” section on the back of each survey, which includes information identifies the surveyor, date, station, and time.

Appendix 3.9 Observational Instrument Beta Testing

We beta tested the observational form at a local café in Long Beach. We determined that the questions should be converted from open-ended to close-ended in order to simplify analysis. We then compared the form to the neighborhood research team’s observational exercise.

Appendix 3.10 Observational Instrument Training

Surveyors were trained on the observational observational instrument protocol on April 15, 2015. The training session lasted approximately 10 minutes and provided surveyors an opportunity to review the observational instrument, ask questions about the categories and practice completing the form. We informed the surveyors that they could complete the observational instrument either before or after surveying customers, but recommended that doing it beforehand may be easier in the event surveying upsets a store manager and they are asked to leave the premises.

CHAPTER 4: GROUNDTRUTHING GENTRIFICATION AROUND LOS ANGELES' METRO STATIONS: A TOOL TO STUDY CHANGES IN THE BUILT ENVIRONMENT

Introduction

Neighborhood change manifests itself in both resident demographics and the built environment. Community-based organizations often worry that the arrival of new residents and changes to a neighborhood may lead to the displacement of long-term residents. Research on neighborhood change often relies on demographic and real estate data to evaluate these trends. However, community groups notice subtle changes that signify gentrification—these are small changes that are difficult to quantify and track. This report introduces “groundtruthing” as a tool to document and evaluate physical indicators of neighborhood change.

Groundtruthing is a method of systematic visual examination of a neighborhood in order to gain a deeper understanding of the built environment and social structure (Chapple, 2015). It involves systematically observing neighborhood blocks and making an inventory of visual indicators. These observations, for street blocks and individual parcels, are used to triangulate other quantitative forms of data and document the extent to which a neighborhood is changing. Examples of visual changes include new construction or renovated properties that are visibly distinct in contrast to the surrounding block. Groundtruthing adds nuance and context to other data sources—for example, it can document whether there are substantial changes in curb appeal and infrastructural improvements. These indicators are important neighborhood characteristics, but are currently not captured through statistical data.

This chapter describes how we designed and used a groundtruthing instrument to document the presence of visual gentrification indicators. We then analyze results from groundtruthing six Los Angeles Metro rail station areas and make recommendations for future groundtruthing applications. The study found that areas experiencing early stages of gentrification display different visual indicators than areas in late stages of gentrification. Surprisingly, stereotypical indicators of gentrification such as upscale cafes or yoga studios were infrequently observed in the neighborhoods where community groups are most concerned about gentrification. However, several subtle indicators of change were observed in neighborhoods in early stages of gentrification, such as minor cosmetic residential renovations and higher-end landscaping or xeriscaping. The determination of signs indicating early gentrification, such as cosmetic investments of paint and landscaping, helps to identify neighborhoods at risk for residential or commercial displacement. Groundtruthing quantifies these changes and is a tool that can be used by community groups and decision makers to promote equitable neighborhood development.

Literature Review

Quantitative researchers have relied heavily on administrative data to measure gentrification, which has previously been defined as demographic changes related to race, income, and educational attainment (Krase, 2012; Kreager, Lyons, & Hays, 2011; Papachristos et al., 2011; Smith & Williams, 1986). However, definitions of gentrification have become more nuanced over time. Newer definitions of gentrification recognize the complex effects of gentrification not only on the socioeconomic

demographics of the community, but also as changes to the built environment less easily captured through statistical data (Barton, 2014). Hammet (1984) describes gentrification as “the invasion by middle-class or higher-income groups of previously working-class neighborhoods or multi-occupied ‘twilight areas,’” including physical renovations of housing and surrounding building stock (p. 284). While statistical data used in prior reports has represented disinvestment or investment in absolute terms, visual data can be used to capture perceived improvement or deterioration.

To overcome these previous issues with quantitative data, more recent studies have included qualitative visual indicators and changes to the built environment that are able to measure quality of life in neighborhoods (Hwang & Sampson, 2014). An example is the failure of earlier studies to incorporate significant public and private investments, such as road and sidewalk infrastructure, or housing and development policies that can influence the trajectory of the neighborhood. Groundtruthing has been developed as a means to inform and verify the visual appearance and environmental inventory data of neighborhoods, in addition to statistical indicators of change, and observe how visual cues relate to quantitative analysis.

However, this method has limitations, particularly when expanding the scope of work to multiple researchers and quantifying data; some of the biggest challenges with groundtruthing and other types of visual assessment are subjectivity in classification, difficulty establishing a neighborhood baseline before the alleged gentrification, and the ability to collect this data on a large scale. Converting visual records to objective data is a highly subjective process, relying heavily on neighborhood context and researcher

background. Barton (2014) examines the implications of the strategy used to identify gentrified neighborhoods, finding that use of qualitative or quantitative strategies or a combination of both can produce greatly varied results both geographically and numerically. In-depth training of all researchers is necessary to standardize interpretations of visual evidence, and conclusions must be controlled for outside factors such as crime or proximity to amenities. An additional criticism of this method alleges that case studies focus on neighborhoods already identified for potential gentrification, where people have already perceived visual indicators of gentrification (Barton, 2014). This creates a difficulty establishing a baseline of visual appearance prior to concern of gentrification. Furthermore, the detailed and manual nature of this work creates a difficulty in data collection on a large scale. Technological innovations, such as Google Earth, help overcome some of these challenges, reducing the overall time and cost of collecting data, as well as collection objectivity (Sampson and Hwang, 2014; Clarke et al., 2010).

The most sophisticated groundtruthing analysis to date is Sampson and Hwang's (2014) visual gentrification study. The researchers studied a total of 23,000 Chicago street segments, comparing data captured in 1995 to images of the neighborhoods from 2007 to 2009. In 1995, Sampson and Hwang (ibid) painstakingly documented the physical conditions of neighborhoods showing initial signs of gentrification with videotape in a windshield survey approach. While this captured an immense amount of visual data not used in earlier studies, the process was tedious and costly. In the recent data collection, Sampson and Hwang (ibid) captured visual evidence of current conditions using Google Street View gentrification observations and coded the data.

Their use of Google Street View follows other recent studies utilizing widely available and adaptable online measures, reducing the overall cost of research (Raudenbush and Sampson, 1999; Odgers et al., 2012). They found that neighborhoods in early stages of gentrification two decades earlier were increasingly gentrified if the existing population was at least 35 percent non-Hispanic white; in neighborhoods with at least 40 percent or more black residents, though, they found that gentrification slowed or stopped. The study controlled for factors including crime, perception of physical disorder, and proximity to amenities, and included visible indicators of public and private investment such as roads and sidewalks. From these results, they concluded that race helps determine the degree of benefits communities experience from gentrification. Recommendations from the authors included enhancing public policy and intervention in stabilization of neighborhoods and prevention of displacement.

While previous research identifies the changing definition of gentrification, groundtruthing's function, limitations, and examples, no research has focused on the visual impact of transit-oriented development (TOD) in Los Angeles and its potential consequences on low-income communities. Although the city and state are focusing intensive resources towards funding and supporting TOD, the effects and beneficiaries of this development have not been identified. This study pilots an efficient, inexpensive means of collecting visual data to identify areas of gentrification. We focus our research on six diverse station areas in Los Angeles to test and redefine our methodology, and dissect broader lessons about visual indicators of neighborhood change.

Methodology

The research team designed and used a groundtruthing survey intended to complement statistical data with visual data in six station areas. Visual observations were recorded for blocks and individual parcels. The six Metro rail station areas profiled in this study represent geographically and demographically diverse areas along several different Metro rail lines: 103rd Street/Watts Towers (Blue Line), Chinatown (Gold Line), Highland Park (Gold Line), Hollywood/Western (Red Line), Mariachi Plaza (Gold Line), and Expo/Vermont (Expo Line). The team selected these stations in consultation with the study sponsors, the Air Resources Board Advisory committee, the California Endowment, and the Thai Community Development Center. Visual observations took place between March and April 2015.

The survey documented visual indicators of residential and commercial gentrification near transit stations. As gentrification or displacement occurs, community members and planners can use groundtruthing to capture resulting physical changes, such as new or rehabilitated commercial and residential properties that are visibly distinctive in comparison to the surrounding block. The research team specifically looked for trendy cafés on blocks composed primarily of ethnic shops and restaurants, or new multifamily apartment buildings surrounded by older single-family homes without recent renovations.

Description of Groundtruthing

The study employed a tiered approach to gauge both overall sense of gentrification through visual indicators, as well as whether individual parcels experiencing recent property activity—land transfers and building permits—

demonstrated visual characteristics of gentrification. To do this, the team produced two separate survey instruments for block and parcel level observations, although both captured similar data. The team selected blocks based on proximity to the station, and parcels based on land use and recent transaction or permit records. The research team observed a total of 98 blocks (an average of 16 blocks per station area) and 180 commercial and residential parcels (an average of 30 parcels per station area). These visual observations triangulate demographic data trends found through demographic data from the United States Census Bureau, real estate transaction records from the County Assessor and DataQuick, interviews with community organizations and public sector agencies (see Chapter 5), and the results of a business survey and transit survey administered by the UCLA research team (see Chapter 2 and 3).

Street Blocks

The team selected blocks that were within a half-mile radius of the Metro rail stations regardless of land use or transaction activity. A half-mile is generally considered the distance that a commuter will walk from their home or place of work from a transit station before selecting another mode of transportation (Cervero, 2008). Beyond a half-mile threshold, it is difficult to connect the opening of the Metro rail station and observed neighborhood change. The groundtruthing exercise involved walking through the six case study neighborhoods and documenting visual observations on each block. Researchers photographed each block and parcel of interest to supplement the findings.

Block-level evaluations aimed to capture indicators of gentrification on the street blocks surrounding the Metro rail stations. Surveyors assessed each block for:

- Observable land use (e.g., single-family residential, commercial retail, institutional)
- Visible public infrastructure (e.g., pedestrian lighting, bus shelters, bike infrastructure)
- Characteristics of individuals and the observed level of diversity present on the block (e.g., age, race, gender)
- Physical disorder (e.g., graffiti, litter, neighborhood watch signs)
- Indicators of ethnic commercial presence (e.g., signs, goods, businesses)
- Signs of commercial gentrification (e.g., upscale coffee shops, yoga studios and other upscale recreational facilities, recent renovations)
- Signs of residential gentrification (e.g., new construction, recent renovations, upscale landscaping)

Indicators of commercial gentrification surveyed include specialty, high-end, or boutique stores and restaurants. Signs of residential gentrification include new construction, conspicuous or recent renovation of buildings (such as new paint, doors, windows, or patios), upscale landscaping or xeriscaping, and the presence of luxury or “green” vehicles parked in the driveway or on the street. The team selected these indicators after consulting with the UCLA research team and UC Berkeley research team that completed prior groundtruthing at San Francisco Bay Area transit stations.

Parcels

The team identified parcels located on blocks with high rates of property activity compared to the nearby blocks. Using DataQuick data, the team mapped parcels with new construction, renovation, or sales to single-family homes, multifamily buildings, and

commercial properties between 2008 and 2013. The team then identified the average number of parcels per block that experienced transactions during the five-year period. Any block within a half-mile radius of the station that exhibited a higher-than-average rate of property activity was included in the sample. For example, if the average number of parcels experiencing change in a station area was 15 percent, then any block in which more than 15 percent of parcels experienced change and which are fully within the half-mile boundary were included in the groundtruthing sample.

Within each selected block, researchers visited parcels which met the described criteria to perform parcel-level inventory of building characteristics. This visual analysis included descriptions of:

- Building type (e.g., single-family, multi-family, strip mall)
- Building signs and markings (e.g., for sale, for rent, eviction notices)
- Occupancy status (e.g., occupied, not occupied, unable to judge)
- Building characteristics (e.g., newly constructed, older building and renovated, older building and not renovated)
- Overall building appearance (e.g. below average, average, above average)
- Physical appearance relative to its surroundings (e.g., roughly consistent, out of place and higher-end, out of place and lower-end)
- Physical signs of residential/commercial gentrification (e.g., new construction, recent renovations, upscale landscaping)

The instrument also accounted for signs of commercial gentrification, which include new construction, notable renovation, upscale landscaping, and upscale store frontage. Photographs supplemented these written observations.

The following survey documents are found in the appendices:

- 4.1 Groundtruthing instruction sheet
- 4.2 Block groundtruthing form
- 4.3 Residential parcel groundtruthing form
- 4.4 Commercial parcel groundtruthing form
- 4.5 UCLA consent letter
- 4.6 Land use maps by station
- 4.7 Block maps by station
- 4.8 Parcel maps by station
- 4.9 Demographics by station
- 4.10 Groundtruthing results by station

Challenges

The research team experienced a number of challenges, including surveyor subjectivity, inconsistent numbers of cases between study areas, and sampling limitations. While in the field, it was difficult to consistently evaluate whether or not a building or parcel condition is objectively considered average, slightly below average, or

slightly above average. Furthermore, working with a team of researchers increases the chance of discrepancy. To overcome this challenge, the team beta-tested the instrument and at least two researchers groundtruthed each neighborhood to ensure consistency and to identify inconsistencies. In designing the survey, the research team expected observations of residents to be useful in observing changes to the neighborhood; however, the researchers observed very few residents, particularly in residential neighborhoods. For this reason, this study is complemented by Census data and surveys of transit and business users.

In conducting parcel-level analysis, researchers visited parcels that had been sold or substantially rehabilitated in the past five years, as determined by sales records, permits, and visual observations during fieldwork. The number of property sales varied dramatically between case study neighborhoods. For example, the quantity of recent sales in the Expo/Vermont station area was high, a neighborhood affected dramatically by the foreclosure crisis during recent years, while the Mariachi Plaza station area had relatively few recent sales. In areas with relatively few transactions the research team selected any parcel that met the parcel selection criteria. Nonetheless, at least fifteen parcels are included for each station area, providing a sufficient sample to evaluate trends.

Case study station areas

All six case study neighborhoods are located in the City of Los Angeles. The Metro rail stations located in each neighborhood were opened between 1990 (103rd Street/Watts Towers) and 2012 (Expo/Vermont). Each neighborhood also has an average

income below the Los Angeles County average and is less than 50 percent non-Hispanic white.

Figure 4.1: Demographic details of station areas

	Hollywood/Western	Mariachi Plaza	Expo Vermont	Highland Park	Chinatown	103rd/Watts Towers	TOD average	County average
Income (2013)	45,600	37,924	34,152	52,932	34,088	40,376	51,471	81,416
Change in income 90-2013	-10%	-13%	-17%	-1%	-14%	13%	9%	-5%
Change in income 00-2013	-1%	-7%	-20%	-7%	-13%	-9%	7%	-6%
Change in income 90-00	-9%	-6%	3%	7%	-1%	24%	2%	1%
Largest race/ethnic group	White	Hispanic	Hispanic	Hispanic	Asian	Hispanic	Hispanic	Hispanic
NHW	48%	2%	12%	9%	9%	1%	15%	28%
% point change in NHW	-1%	0%	5%	-4%	1%	0%	-3%	-13%
# HH	9,937	3,235	3,190	4,384	2,700	2,894	4,329	N/A
% HH with Child	19%	49%	48%	39%	29%	56%	30%	37%
% Renter	94%	86%	85%	72%	93%	63%	81%	53%
% Moderately Burdened (30%-50%)	22%	24%	21%	26%	26%	25%	27%	26%
% Severely Burdened (50%+)	37%	39%	41%	31%	27%	42%	31%	30%
Ellis Act Evictions 2007-2014	6	0	7	2	4	0	11	
Condo Conversions	11	5	0	5	0	0	44	
Jobs/Housing Balance	0.78	1.22	4.33	0.38	3.45	0.53	3.76	
# Businesses	1,338	558	335	536	1,101	266	1,536	
# Churches	19	28	8	21	18	28	20	

# HS Nonprofits	13	23	8	9	13	11	13	
Yearly Station Traffic Volume (All Boardings and Alightings)	3,327,704	616,151	1,541,988	1,573,073	1,119,344	1,178,918	2,723,794	
SNAP	Yes	Draft	Draft	Yes	Yes	Draft		

103rd Street/Watts Towers (Blue Line)

Watts was first settled as Rancho La Tajuata in in the early 1800s and its economy was primarily based on agriculture until the arrival of the railroad station around the turn of the Nineteenth Century. Upon the station's establishment, the settlement grew rapidly, and the City of Watts was incorporated in 1907 (Empower LA, 2015). It was annexed by the City of Los Angeles in 1926, and the area gained an African-American majority in the 1940s as a result of the Great Migration from the American South. The neighborhood suffered through the Watts Riots in 1965, and a wave of gang-related violence arose in the following decade and lasted until the early 2000s, but has since subsided (Empower LA, 2015). Presently, the area has a Latino majority with African-Americans retaining a significant minority (American Community Survey, 2010). The Metrorail station was completed in 1990 and is at grade.

Chinatown (Gold Line)

The Chinatown Metro rail station is an elevated light rail stop located at North Spring Street and College Street in Chinatown north of Downtown Los Angeles. The station opened in 2003 as an eastern extension of the Gold Line, which connects Pasadena, Downtown Los Angeles, and East Los Angeles (Los Angeles County Metropolitan Transportation Authority, 2015). Chinatown includes New Chinatown and the Los Angeles State Historic Park, also known as the Cornfield. The current Chinatown is the result of the construction of the nearby Union Station in the 1930s, which forced residents to migrate north in the 1930s to the current location of Chinatown (Cheng, 1988).

Highland Park (Gold Line)

Highland Park is one of Los Angeles' oldest residential neighborhoods, and is considered by many as one of its first suburbs, with small lots and single-family homes. The neighborhood has been predominantly Hispanic since the 1960s. Though marred by high crime rates and gang presence through the 1990s and early 2000s, criminal activity subsequently dropped dramatically (Katigbak, Lefkowitz & Wasilco, 2011). The Metro rail station opened in 2003 and is at grade.

Hollywood/Western (Red Line)

The Hollywood/Western Metro rail station is located near the intersection of Hollywood Boulevard and Western Boulevard in East Hollywood. The neighborhood is a densely populated, moderately diverse area of the city located in the central region of Los Angeles. The neighborhood is notable as the home of ethnic enclaves such as Little Armenia and Thai Town. Beginning in the 1960s, many immigrant communities from around the world settled in East Hollywood: from East Asia, Latin America, the former Soviet Union and the Middle East. Each community continues to leave its mark on the neighborhood. East Hollywood was affected by the 1992 Los Angeles Riots and also sustained significant damage in the 1994 Northridge earthquake (East Hollywood Neighborhood Council, 2015). Today it is known for the Barnsdall Art Park and Los Angeles Community College and one of Los Angeles' largest hospital districts (East Hollywood Neighborhood Council, 2015). The area's heavy rail subway station opened in 1999.

Mariachi Plaza (Gold Line)

Boyle Heights is a predominantly Hispanic working class neighborhood, located directly east across the river from downtown Los Angeles. Referred to as the “Ellis Island of the West Coast,” the neighborhood has historically been home to minority groups, often the result of social exclusion from downtown and the west side of Los Angeles (Beltran et al., 2011). Mariachi Plaza is at the commercial center of this neighborhood and is surrounded by a number of established Mexican restaurants and stores along the First Avenue corridor. Its underground Metro rail station opened in 2009 as part of the Eastside Gold Line subway extension.

Expo/Vermont (Expo Line)

The Expo/Vermont Metro rail station is an at-grade light rail stop located in the West Adams neighborhood of Los Angeles. A number of major regional destinations are located in close proximity, including the University of Southern California (USC), Exposition Park, the Natural Museum of History, and the Memorial Coliseum which was host to the 1932 and 1984 Olympic Games. Formerly a stop along the Pacific Electric Line, the line was reconstructed and opened for light-rail service in 2012. USC redeveloped much of the area in recent years (the University Park project is a notable example) and created several amenities for its students. While there is student housing on campus, many students also seek housing in the surrounding community, where several single-family homes can be seen transformed into multi-unit residences for student housing. Aside from students, Latino renters comprise the majority of the residential demographics.

The research team gathered the groundtruthing results to compare commonalities and differences among the stations. The following sections detail the groundtruthing findings of each station area and discuss analysis in the context of the neighborhood demographic changes observed.

Results

In this section, the station areas are organized by the extent of observable gentrification, from greatest to least (see Appendix 4.9 for summary of results). Some of the indicators observed were consistent with what the team expected to find, but there were also several unexpected indicators of neighborhood change. Multiple stations showed noticeable signs of residential gentrification, but very few signs of commercial gentrification. However, none showed signs of commercial gentrification without indicators of residential gentrification.

Hollywood/Western

This station area displayed clear visual indicators of late-stage gentrification in both commercial and residential land uses. The area exhibited the highest rate of newly constructed properties, with brand-name retailers in commercial spaces and the lowest prevalence of ethnic businesses and non-English signage. It featured the most stereotypical signs of gentrification (e.g., upscale cafes, specialty gyms, and high-end grocery stores) of any station area observed. There was also more observed transition in this neighborhood from single-family and smaller multifamily buildings to larger apartment buildings with commercial establishments tailored to higher-income residents.

The team surveyed 15 block faces and 25 parcels in the quarter-mile radius surrounding the Hollywood/Western Metro rail station. Multifamily residential land uses dominated the area at 45 percent of total land uses. Other land uses included retail (15 percent), vacant lots (15 percent), hotels (12 percent), mixed-use (11 percent), and institutional (1 percent). Of the 25 parcels with activity, 23 were residential and two were commercial parcels. Multifamily housing with five or more units made up the vast majority (87 percent) of residential parcels visited; nine percent of the residential parcels were single-family.

Nearly all of the residential blocks showed signs of residential gentrification. The area exhibited the highest prevalence of both new construction and property renovations: 27 percent had new construction, another 27 percent showed signs of recent renovations, and 40 percent had upscale landscaping. Of the residential buildings, 9 percent were new, 27 percent renovated, and 36 percent had ongoing renovations. In relation to the surrounding buildings, the vast majority were ranked average (61 percent), or above average (22 percent). Only 2 (9 percent) of the buildings were lower end and out-of-place with neighborhood scale and character.

Several signs of both commercial and residential gentrification were also observed at the parcel level. This area had the highest prevalence of upscale landscaping at 44 percent. One parcel specifically had a posted “Public Hearing” sign for demolition and new construction. Other buildings had signs that demonstrated increased territoriality within the district, including “No trespassing” signs, “Property closed to the public” signs, and “Security camera” signs.

Hollywood/Western Metro rail station is on a busy commercial corridor located on the edges of Thai Town, Hollywood, and Little Armenia neighborhoods of Los Angeles and shows several signs of commercial gentrification. Only one block (7 percent) showed non-English signs and ethnic goods, and only three blocks (20 percent) had ethnic businesses. These were mostly Thai restaurants catering toward a diverse and younger crowd. One block had a specialty food store, a Starbucks and a Crossfit specialty gym. Of the six stations studied, these were the only more “stereotypical” gentrification indicators observed. Additionally, four of the commercial blocks (27 percent) had new construction, three had recent renovations (20 percent), and three had upscale landscaping (20 percent). Block segments had posters, a mural, a painted utility box, banners on the street lights, and a statue. Despite these clear signs of commercial gentrification, the majority of businesses were older, well-established stores. The two commercial buildings were both new construction: the Thai Outreach Hollywood Church and a mixed-use housing and retail with Walgreens and a Verizon Wireless store. Despite signs of gentrification well on its way throughout the neighborhood, the new church suggests the neighborhood still retains some of its original Thai identity. Both properties had upscale landscaping and signage.



Image 1 New commercial construction

Expo/Vermont

Proximity to downtown and institutional amenities make Expo/Vermont another area with extremely high potential for gentrification. Furthermore, the lower rate of long-term residents, as opposed to the short-term student population and renters, leaves the area with a smaller base of stable community cohesion.



Image 2 Recently renovated housing marketed towards students

The area had a high level of parcel activity, much of which consisted of moderate cosmetic improvements and division of single-family homes into shared student housing. Though commercial gentrification in this area was not observed in this study, the residential properties showed a higher rate of low-level cosmetic investments in properties to attract a new rental base.

The research team surveyed 18 block faces surrounding the Expo/Vermont station. The predominant land use in the area was residential, with 34 percent of overall land use multifamily homes and 10 percent single-family homes. Additionally, 34 percent of the area is covered by institutional uses, the highest of the station areas studied. Institutional uses included the USC, St. Mark's Lutheran Church, and Masjid Omar ibn Al-Khattab mosque. Jesse Brewer Jr. and Exposition Parks make up the last 20 percent of the land uses around the station.

Though there was a large presence of institutional and public land uses, and the USC campus, Exposition Park, and the area immediately surrounding the Metro station

had sidewalk and public infrastructure improvements, there were few visible indicators of public investment in the streetscape beyond that. Some of the blocks had bus shelters and street furniture present (22 percent) while fewer had bike infrastructure (11 percent). The most common type of investment seen was routine updates to road and sidewalk surfacing and safety or sanitation elements, with 33 percent of blocks displaying street improvements, pedestrian-scale street lights, and city trash receptacles.

The team surveyed 49 residential parcels, but no commercial parcels due to the lack of both commercial land uses and recent property commercial transactions in the area. Expo/Vermont had a mix of residential land uses with both new construction and renovated buildings. Two block faces showed new construction, while twelve blocks (67 percent) showed no visible renovation, and one block had moderate renovations. Four block faces had visual presence of high-end landscaping, but there was no presence of luxury vehicles as seen in other case studies.

The area consisted of lower density single-family homes, with indicators of increasing residential density through new multifamily construction and conversion of single-family homes to subdivided multifamily dwellings. The majority of parcels showing property activity were visibly targeting the university student population, with signs advertising for student housing. A total of 59 percent of the parcels were single-family, 31 percent of the parcels were small multifamily properties (two to four units), and 10 percent were large multifamily residential properties (five or more units). While the vast majority of properties were occupied, one parcel observed (a larger single family home) was in the process of being converted into higher density student housing.

This area exhibited the highest rate of signage among residential parcels encouraging the safety and security of individual parcels, promoting student rental housing, and displaying commercial uses on residential property (businesses operating out of single family homes). A total of 32 percent of properties displayed signs encouraging safety and security, including security company representation, security camera presence, private property, beware of dog, and closed to the public.

Sixteen percent of parcels exhibited “For rent” signs, with many explicitly advertising student housing. One sign in the neighborhood asserted “We Buy Houses,” suggesting speculative home buying. Many of these signs advertised student housing for USC students. These signs were almost exclusively on renovated single-family homes that seemed to function as group houses or subdivided private dormitories for students. Signs advertising “Equal Opportunity Housing,” implying compliance and participation in federal affordable housing programs were located on many of the same blocks as these homes.

Other signage represented a mix of commercial uses in the residentially-zoned district. A few houses also exhibited existing commercial uses inside or advertised through residential properties, such as child daycare services or housekeeping. These signs indicate multiple uses in single-use zoned areas, and likely use by the informal sector. A benefit of groundtruthing is the ability to perceive these undocumented or informal uses.



Image 3 Sign promoting speculative real estate sales

A total of 12 percent of parcels were newly constructed. Of the 88 percent older buildings, 59 percent were renovated, and 29 percent were not renovated. Many parcels (63 percent) were roughly aesthetically consistent with the surrounding block, while 37 percent were nicer. This implies that many of the houses that exchanged hands did not significantly change quality. The average building score was 3.49, slightly above average for the station areas. The average building improvement was 1.95, (not visible to minor cosmetic improvements). Several front yards in the area were paved over with concrete. Some older buildings had dirt yards. Some of the nicer residential buildings had xeriscape gardens or permeable driveways. Eight percent of homes had upscale landscaping and just one home had an upscale vehicle parked in front.

Generally, new construction was higher density than surrounding houses. Rehab and sales of houses sometimes consisted of subdividing single-family homes into multiple dwelling units. This happened especially with single-family homes converted into student housing for USC students. These exterior renovations often consisted of a new door, fresh paint and some bright colors. The team suspects that many homes may have foreclosed during the housing crisis between 2009 and 2013 (Sarode, 2013) and this may be why there are so many sales in this neighborhood as compared to others.

None of the commercial parcels within a half mile of the station met the criteria of the study, suggesting little growth or change in the commercial market. One of the few retail establishments in the area was a Mexican butcher shop.

Highland Park

Highland Park typified an older residential neighborhood that was changing through extensive renovations to existing single family homes. This residential commuter neighborhood displayed moderate indicators of residential gentrification but lacks indicators of commercial gentrification within the station area. It has the highest rate of recent upscale renovations (two-thirds of all parcels surveyed), signage encouraging real estate speculation and public infrastructure of any of the stations surveyed. Many block faces featured new construction and residential renovations which included luxury elements such as upscale landscaping and vehicles. Though there is a lack of new construction, high-quality investments to older residential buildings suggest a higher-income resident demographic. The lack of churches and nonprofits, as opposed to stations such as 103rd Street/Watts Towers, as well as overall presence of non-Hispanic whites, however, may contribute to a heightened perception of residential gentrification.

Highland Park had many signs of residential gentrification, including the highest rate of recent upscale renovations, signage encouraging real estate speculation, and public infrastructure visible on almost all surveyed street blocks (15 out of 16 blocks). The block faces included new construction, and residential renovations with luxury elements (upscale landscaping and cars) present. While only one block showed signs of new construction, twelve block faces (75 percent) had



Image 4 Sign in Spanish invites residents to meeting to discuss gentrification

recent renovations. Additionally, eight blocks (50 percent) had upscale landscaping or fencing, and five blocks (31 percent) had luxury or green vehicles. Other signs of residential gentrification more explicitly signaled neighborhood change: a “Sell your house fast” billboard encouraged speculative buying of residential properties and a sign in Spanish posted at a bus stop invited residents to a meeting to discuss gentrification and neighborhood change. Because the area was primarily residential, there were very few commercial properties to gauge presence of ethnic businesses or commercial gentrification.

Out of the residential parcels surveyed, two-thirds of the parcels were older buildings that had been renovated, and 13 percent were new construction. Six of the parcels had an appearance of higher property value or quality relative to the surrounding buildings. One of these properties showed signage conveying enhanced private security. Specific improvement to properties included nine parcels with new paint on the building, four parcels with upscale landscaping, three parcels with drought-resistant landscaping, and one parcel with artwork in the front yard.

103rd Street/Watts Towers

Although the 103rd Street/Watts Towers station area was the oldest of the Metro rail stations we surveyed, it showed only moderate signs of residential gentrification and very few signs of commercial gentrification. Renovated homes were



Image 5 Lack of indicators of commercial gentrification

present on the majority of the surveyed blocks in Watts, however many renovations seemed to be minor and purely cosmetic. While there appears to have recently been a high amount of transactional activity among residential parcels, a change in ownership has only occasionally resulted in the improvement of a parcel's appearance.

Of the residential parcels, about 71 percent were single-family and the rest were multi-family containing between two and four units (See Table 4.2). One unit was for sale, while three were for rent. Those available for rent were mostly new buildings. In total, approximately a quarter of the residential units appeared to be newly constructed, and more than a third were either in the process of renovation or appeared to have been recently renovated. Additionally, roughly a fifth of the units appeared to be significantly more upscale than their surrounding units, while only two were significantly downscale compared to their neighbors. Nine residential blocks had landscaping that appeared to be upscale, while three blocks had luxury vehicles. Additional observations include signs advertising property management. Several houses had bars on the windows and a neighbor complained of loiterers near two abandoned houses.

Commercial land uses were infrequently observed in Watts, though there was a significant institutional presence. While there was only one block dominated by commercial and retail, the Martin Luther King Shopping Center, it did contain some stores that had recently undergone renovations. However, most of the businesses appeared to cater toward low-income demographics. Examples of retail establishments include Food 4 Less, Popeye's, Burger King, and small hair salons. There was a noticeable institutional presence near the Metro rail station, with the largest institution being the Watts Health Center. Additionally, the surveyed area included the St. Lawrence of Brindisi Elementary School and St. Lawrence of Brindisi Church.

Mariachi Plaza

This historic neighborhood served as a mixed-use commercial center that possibly exhibited signs of early residential and commercial gentrification. Though there were visual indicators of public and private investment, this was largely community-serving and



Image 6 One of several businesses in Mariachi Plaza with non-English signage

likely due to the concentration of community centers and nonprofits, which signifies a strong community presence. Indicators of residential gentrification were present, but less significant than at the station areas described above, suggestive of early stage gentrification. The commercial establishments retained a strong ethnic character, and thus indicators of commercial gentrification were deemed to be minimal. There were also some signs of disorder, further demonstrating a lack of significant gentrification.

Many of the blocks surveyed exhibited signs of public infrastructural investment. One-third had newly paved streets and sidewalks, and 83 percent of blocks had pedestrian-oriented street lights. One-third of blocks also had green bike lanes, though the faded paint suggests these have been in the neighborhood for some years. The artistic, custom bike parking stands located on those same blocks contributed to an established sense of place; however, the racks were not well used at the time of the survey.

A total of 53 percent of the buildings visited were multifamily residential with two to four units, 40 percent were single-family homes, and 7 percent (one house) was single-family. Of those homes, 80 percent were occupied and 20 percent were unoccupied. Most buildings (84 percent) were older, with only have showing any signs of renovation. A total of 16 percent of buildings were newly constructed. Five homes that appeared to be single-family function as multifamily residences, with multiple mailboxes, doorbells, and cars in the driveway. One home was repurposed as the site of a human services nonprofit, with the banner “Girls Today, Women Tomorrow” on the front of the house (located on an otherwise entirely residential block). Only four of the houses had new looking, xeriscape lawns which gave them an appearance above that of their surrounding parcels.

There were numerous of signs of ethnic commercial presence in the blocks. Five blocks had Spanish signs and four blocks had Latino (mostly Mexican) businesses. Two blocks had higher-end Mexican cafes, La Monarca and Primera Taza café. The block surrounding Mariachi Plaza had large, colorful murals, celebrating Mexican culture and

surrounding a large, ornate gazebo. The gazebo was next to the Metro rail station and appears to be a gathering place for mariachi bands looking for work.

Chinatown

This is also a historic ethnic neighborhood that shows relatively little commercial gentrification and very early signs of residential gentrification. While none of the blocks surveyed were predominantly residential, there was some indication of gentrification among the residential parcels surveyed. The commercial blocks surveyed possessed minimal renovation or new construction. Only two residential parcels appeared to be newly constructed. Public infrastructure, however, appeared to be widely employed, and there was a high degree of ethnic character among commercial blocks. As with Mariachi Plaza, this may be the result of strong community presence.

As stated, residential land use appeared to be uncommon in the areas immediately adjacent to the Metro rail station. Of the residential parcels, eight were single-family, five were multi-family with less than five units and four were multi-family with five or more units. Only one residential unit did not appear to be occupied and there were no signs for the sale or rent of these units. About two thirds of the residential parcels appeared to be newly constructed, albeit on what appeared to be previously undeveloped land, and another quarter to have been newly renovated.

Most of the businesses in Chinatown appeared to be well established. On the blocks observed, there were no newly constructed commercial establishments. Only one block appeared to have moderate renovations made, while just one other had been

extensively renovated. Two blocks had businesses with upscale landscaping, and one had luxury vehicles visiting the establishments. One commercial lease sign was observed.

Public infrastructure appeared to be widespread, with over half of the street segments possessing trash cans and street furniture. Just under half had pedestrian street lighting and metered parking. Three blocks appeared to have street or sidewalk improvements. Additionally, wayfinding signage and Chinatown banners were widely distributed. Chinese architecture and street art were seen often. Fourteen of the blocks had non-English signage, while about two thirds of them had ethnic businesses.

While each neighborhood around the Metro rail stations showed at least minor signs of gentrification, the extent of neighborhood change in these areas varied widely. Hollywood/Western decidedly showed the most gentrification in manner consistent with what the research team expected to find. Expo/Vermont also displayed extensive signs of gentrification, but signifiers of neighborhood change in this area were different than the team's hypothesized indicators, such as fashionable retail establishments. Highland Park and 103rd Street/Watts Towers each showed some signs of residential gentrification, though commercial gentrification in these neighborhoods appeared to be minimal. Mariachi Plaza and Chinatown possessed the fewest observable indicators of gentrification for both commercial and residential blocks and parcels. The following section uses these indicators to classify stations into four typologies that identify different trends and stages of gentrification.

Summary of results

A comparison of key indicators are listed in Tables 4.1-4.5. The full results of the groundtruthing block and parcel level data is listed in Appendix 4.9.

Figure 4.2

Number of Surveys by Station Area

Survey Type	Hollywood/ Western	Expo/ Vermont	Highland Park	103rd/ Watts	Mariachi Plaza	Chinatown
Blocks	15	18	16	20	12	17
Parcels	25	49	15	49	18	24

Figure 4.3

Land Use By Block

Land Uses	Hollywood/ Western	Expo/ Vermont	Highland Park	103rd/ Watts	Mariachi Plaza	Chinatown
Single Family	0.00%	11.67%	48.13%	40.00%	32.08%	0.00%
Multifamily	45.33%	38.33%	41.25%	28.00%	12.08%	0.00%
Retail	15.33%	0.00%	0.94%	9.00%	31.67%	37.06%
Commercial	0.00%	2.22%	0.00%	1.00%	0.00%	0.29%
Institutional	1.33%	25.56%	4.69%	17.00%	12.50%	7.06%
Industrial	0.00%	0.00%	0.00%	0.00%	0.00%	4.12%

Mixed-Use	10.67%	0.00%	0.00%	0.00%	4.17%	26.18%
Vacant	15.33%	0.00%	0.00%	5.00%	7.50%	25.29%
Other (e.g., park)	12.00%	22.22%	5.00%	0.00%	0.00%	0.00%

Figure 4.4

Land Use By Parcel

Land Use	Hollywood/Western	Expo/Vermont	Highland Park	103rd/Watts	Mariachi Plaza	Chinatown
Single Family	8.70%	59.18%	53.33%	71.74%	42.86%	47.06%
2-4 MF	0.00%	30.61%	33.33%	28.26%	57.14%	29.41%
5+ MF	86.96%	10.20%	13.33%	0.00%	0.00%	23.53%
Vacant Lot	4.35%	0.00%	0.00%	0.00%	0.00%	0.00%

Figure 4.5

Parcel Building Improvements

Building Improvements	Hollywood/Western	Expo/Vermont	Highland Park	103rd/Watts	Mariachi Plaza	Chinatown
New Construction	8.70%	12.24%	13.33%	23.91%	14.29%	64.71%

Older Building	86.96%	87.76%	86.67%	76.09%	85.71%	35.29%
Renovated	56.52%	59.18%	66.67%	30.43%	42.86%	23.53%
Not Renovated	26.09%	28.57%	20.00%	45.65%	42.86%	11.76%
Current Construction	4.35%	0.00%	0.00%	0.00%	0.00%	0.00%

Figure 4.6

Parcel Appearance in Neighborhood

Appearance in Neighborhood Context	Hollywood/Western	Expo/Vermont	Highland Park	103rd/Watts	Mariachi Plaza	Chinatown
Out of place, higher	26.09%	36.73%	40.00%	21.74%	35.71%	5.88%
Out of place, lower	8.70%	2.04%	0.00%	4.35%	14.29%	0.00%
Roughly the same	60.87%	63.27%	53.33%	73.91%	50.00%	88.24%
Unable to Judge	0.00%	0.00%	6.67%	0.00%	0.00%	0.00%

Analysis

The research team identified three overarching findings regarding Los Angeles TOD and gentrification. First, we categorized stations into four typologies based on gentrification stage and type of indicators seen, which can aid in pairing neighborhoods with appropriate planning tools to address displacement. Due to differences in land use and demographic disaggregation, these stations displayed distinctive visual indicators of gentrification. These typologies are: high-density regional destination (Hollywood/Western); residential commuter neighborhood (Highland Park and 103rd Street/Watts Towers); mixed-use institutional hub (Expo/Vermont); and mixed-use ethnic neighborhood (Mariachi Plaza and Chinatown). Second, we observed that property renovations, rather than stereotypical yoga studios and cafes, appeared most regularly and were most indicative of early-stage neighborhood change. Finally, fewer indicators of gentrification were observed in ethnically homogenous neighborhoods. This last finding can be attributed to either the racial concentration as observed in Sampson and Hwang's (2014) study, or to the presence of ethnic gentrification rather than white gentrification.



Image 7 Subtle property renovations that do not require building permits, such as paint and landscaping, alter neighborhood character

Typology #1: High-density mixed-use regional destination (Hollywood/Western)

The Hollywood/Western Metro rail station (opened in 1999) area is a regional destination for non-local visitors and tourists, and exhibited clear signs of both residential and commercial late-stage gentrification. Data for transit boardings and alightings support this, which are the highest of all case studies as well as the TOD average. This station also had the greatest density for both commercial and residential uses among case study areas. The area has a total of 1,338 within a half-mile radius of the station, and one of the highest percentages of new commercial construction. The area also has more than 9,000 households and no single-family households in the surveyed district; this extremely high density of residential dwellings may explain why the job to housing balance is only 0.78.

Demographic analysis of the area shows that there is a predominant non-Hispanic white population and high rate of renter households. The most prevalent race in the area is non-Hispanic whites, at 48 percent, with little change since 1990. Additionally, only 19 percent of households have children. The multifamily housing is also largely apartments rather than condominiums, with the highest presence of renters among TOD station areas at 94 percent. However, more than half of these are rent-burdened, with 37 percent paying more than 50 percent of their income on housing, and an additional 22 percent paying between 30 and 50 percent of their income on housing. As this indicates high rent costs, it is unlikely many low-income residents would be able to afford to remain in the area.

Almost all blocks showed signs of residential or commercial late-stage gentrification. Data shows that this station area has had the highest prevalence of new construction, with 27 percent of blocks surveyed with new construction exhibiting signs of gentrification. Signs of commercial gentrification were also present on a vast majority of blocks, likely catering to visitors and tourists frequenting the area. Additionally, the station area had the lowest presence of non-English commercial signage, at 7 percent of blocks surveyed.

Community groups and planners should be aware of the difficulties in stabilizing neighborhoods where there is a high prevalence of renter groups and destinations for non-local visitors. Hollywood/Western exhibits a concentration of large chain stores catering to the demographics of visitors to the area, rather than low-income residents. Strategies to stabilize both residential and commercial low-income tenants may address rent stabilization or subsidization to secure diverse tenants that likely utilize transit.

Typology #2: Residential commuter neighborhood (Highland Park and 103rd/Watts)

Both the Highland Park (opened in 2003) and 103rd Street/Watts Towers (opened in 1990) Metro rail stations are in largely residential commuter districts, out of close proximity to the downtown central business district and other large employment areas. Unsurprisingly, these station areas also have the lowest jobs to housing ratio of the case studies, at .38 and .53 respectively. This is much lower than the regional TOD average of 3.76, and indicates extremely few jobs per household. Compared to other Metro rail stations, there is less of a presence of retail, commercial, or industrial land uses at either station. These two stations also lack popular regional tourist destinations (with the

exception of Watts Towers) present near the Hollywood/Western station, and historic ethnic attractions present near the Chinatown and Mariachi Plaza stations. Highland Park and 103rd/Watts have the highest presence of single-family residential homes, at 48 and 40 percent of total land uses in the station area. Additionally, these are all single-use zoned districts, with no presence of mixed-use development within the study area. This indicates that the Metro rail stations in these areas serve predominantly residential commuting workers, who travel to more job-rich employment areas.

Several indicators may also show relative residential stability and trends representing increasing household wealth. Corresponding quantitative data shows that these areas have relatively high rates of homeownership for TOD areas. Homeownership in these two locations is the highest among case study areas, at 28 percent in Highland Park and 37 percent in Watts, and much higher than the regional TOD average of 19 percent. Both areas also have an above average presence of households with children, at 39 percent in Highland Park and 56 percent in Watts compared to a regional TOD average of 30 percent. These stations also are the only two case study areas to see positive changes in income from 1990 to 2010: 3 percent in Highland Park and 17 percent in Watts, compared to a regional TOD average of 9 percent. Analysis of groundtruthing data also supports these trends of increasing residential wealth. Both areas saw the highest presence of new or upscale landscaping and green or luxury cars when compared with other station case studies, with more than half of all blocks displaying new landscaping and nearly 30 percent of blocks with luxury vehicles--indicators of increased disposable income among residents and investment in residential properties.

Watts also saw a high rate of property turnover, with corresponding indicators of physical renovations to residential properties.

Though anecdotal data suggests that Highland Park is at a more advanced stage of gentrification than Watts, other indicators show that both stations have similar conditions in many other categories. The presence of non-Hispanic whites may be an indicator that contributes to perceived increased gentrification in TOD areas. The proportion of non-Hispanic whites is higher in Highland Park than in Watts, at nine percent compared to one percent. However, the share of non-Hispanic whites in the Highland Park area has actually decreased four percent between 1990 and 2010. Furthermore, this rate in Watts has not changed significantly since the opening of the station more than two decades ago. Although both stations exhibit relatively similar gentrification trends among the surveyed indicators, there may be a higher perception of gentrification in Highland Park than in Watts due to a stronger overall presence of non-Hispanic whites.

The presence of institutional uses may also contribute to a difference between actual and perceived gentrification. Seventeen percent of surveyed land uses in Watts are characterized as institutional, as opposed to less than 5 percent in Highland Park (and 5 percent vacant land). The difficulty in adaptively reusing or demolishing these properties may contribute to the lack of change in these uses. This can contribute to a perceived lack of neighborhood change as these properties act as historical and cultural flagships. However, the stability of these specific institutions may contribute to the overall sense of neighborhood stability, though this may not necessarily reflect the presence or lack of change in residential and commercial uses.

It is also important to note that the presence of historic districts can impact the validity of some visual signs of gentrification. Highland Park is a designated Historic Preservation Overlay Zone (HPOZ), which dictates more strict guidelines for residential renovations on properties within the overlay. This factor may contribute to the low prevalence of new construction (6 percent) in the HPOZ as opposed to the other case studies, but the highest prevalence of renovated older buildings (67 percent). In comparison, nearly one in four residential parcels surveyed in Watts was new construction, but only 30 percent were renovated older buildings. This also contributes to the difference in visual indicators of gentrification between Highland Park and stations such as Hollywood Western, which has a high rate of new residential construction.

Community groups and planners should note that anti-displacement tools in this area should be directed towards residential displacement of owner households. In Highland Park, for instance, a speculative house buying sign posted on a street pole said “We Buy Houses”; these signs target low-income homeowners that may seek short-sales in lieu of foreclosures. Effective strategies to mitigate this type of displacement should highlight government assistance to low-income homeowners, such as loan modifications to create manageable payment options, utility-cost or weatherization programs that can reduce residential utility expenses, or grant programs that directly aid in home repairs.

Typology #3: Institutional hub (Expo/Vermont)

This typology is characterized by a strong institutional presence that draws in non-local visitors and residents. In the case of the Expo/Vermont station (opened in 2012), USC is the large institutional presence attracting a large number of student

residents. Surrounding the university are other nearby institutions, such as Exposition Park, Memorial Coliseum, the Natural History Museum, the California Science Center, and Masjid Omar Ibn Al-Khattab mosque. These institutions made up 25 percent of land uses in the quarter-mile radius surrounding the station, the highest of any case study area. Data also shows a lack of strong community presence, as represented through faith-based organizations and human service nonprofits; the case study had the lowest number of both churches and human service nonprofits. The strong hub of regional institutional uses as well as lack of resident-serving nonprofits may increase the vulnerability of this area to gentrification and displacement.

The majority of the area's residential uses were composed of detached single-family homes for rent, with signs of cosmetic building renovations to increase attractiveness to potential renters. Residential development surrounding the station was relatively low-density, with single-family homes and one-story multifamily residences composing the majority of residential uses. The Expo/Vermont station area also has the second-lowest household income of the case study areas, at \$34,048 annually, a decrease of 16 percent since 1990 (see Appendix 4.8). This household income accounts for both low-income residents and non-employed students. More than 85 percent of households in the survey area are renters, which is higher than average for both the TOD case studies as well as Los Angeles overall. The presence of low-income residents and student housing demand create the potential for tension and displacement.

Overall, it appeared that there may be more intensive land use than



Image 8 Single-family home has been subdivided to accommodate multiple tenants, advertises as student housing

city and assessor records show. The research team observed several single-family homes that had been into multi-unit dwellings to accommodate multiple families or tenants, indicating that there may be a higher rate of renters and density of households than statistical information shows. The area also had a 5 percent increase from 1990 to 2010 in the non-Hispanic white population, which may account for a greater student resident population. A total of 16 percent of all residential parcels surveyed had visible signage, such as “For Rent” signs as well as “Equal Opportunity” and “Student Housing” signage. Additionally, more than 87 percent of all residential parcels surveyed were older buildings, with a majority lacking any visible renovations. This indicates that though there is increased demand, there is a low-level of investment made in properties to attract the low-income student renter demographics.

Given the large institutional employment presence, the jobs to housing balance is high, at 4.33, indicating that it is an employment destination that has potential for future development. However, the station area had the largest decrease in household income, a difference of 16 percent from 1990 to 2010, possibly reflected in an increase in students living in the area. Future development of the area may rely heavily on the redevelopment of Rolland Curtis Gardens, a low-income multifamily housing complex to the southwest of the station, owned by the community land trust T.R.U.S.T. South LA. There are 48 existing units, with plans to redevelop the site into a higher density mixed-use project with 140 low-income units and 8,000 square feet of commercial space.

Community groups and planners should address increasing the voice of community residents through local nonprofits and human service organizations. The high

demand for housing in the area will inevitably drive an increase in housing prices, with the potential to displace low-income residents. Existing efforts to secure housing affordable to low-income residents through low-rent units and land trusts should be expanded.

Typology #4: Mixed-use ethnic neighborhood (Mariachi Plaza and Chinatown)

The Mariachi Plaza (opened in 2009) and Chinatown (opened in 2003) station areas were the case studies with historic dominant ethnic presence and cultural identity, as well as strongest prevalence of mixed-uses. This presence can be seen in the high concentration of ethnic commercial presence across both stations, with all ethnic indicators such as signage, ethnic institutions, and ethnic goods, higher than the average in the study. Both of these neighborhoods are also proximate to downtown Los Angeles and offer a variety of restaurants, shopping, and music venues, which may attract young professionals and non-local tourists to the area. A significant difference in the station areas, however, was the difference in indicators for residential land uses in these districts.

The high concentration of ethnic businesses has potentially increased the demand for local culture, but also poses a threat to the authenticity of the area as they become destination centers for non-local visitors. Both of these station areas have a high prevalence of retail land use—more than 30 percent of blocks surveyed, nearly double the case study average of 16 percent. Chinatown’s commercial presence was comprised of primarily older, established businesses with no visible signs of new construction but signs of an older neighborhood branding campaign with stylized arches and pedestrian plazas. However, it had the highest presence of specialty food shops of all station areas, possibly

targeting visitors to the area. Both of these stations also had the lowest annual Metro rail traffic volume of all case studies.

These two stations differed in residential trends, with Chinatown displaying the fewest households but Mariachi Plaza displaying one of the highest, at 2,700 compared to 3,235 respectively. Chinatown also had the highest prevalence of new construction on residential parcels, at 65 percent of those surveyed, which may be attributed to its proximity to Downtown. This may indicate a quickly growing residential segment of the Chinatown area. This may also skew the jobs to housing balance, currently at 3.45; this number will decrease with the addition of new residential units. Furthermore, the area's population is 9 percent non-Hispanic whites, with a one percent increase over two decades. With the increased signs of speculative development near the Metro rail station, these may indicate early signs of gentrification.

In comparison, Mariachi Plaza's residential segment consisted primarily of older renovated properties rather than new construction. Older buildings represented 86 percent of residential parcels surveyed in this area, with an even distribution of renovated homes and unrenovated homes. Data also shows that community ties are greater in this area than in Chinatown; Mariachi Plaza had the highest number of human service nonprofits (23) and churches (28) located in the area, much higher than the average for the station case studies at 13 and 20 respectively. Additionally, groundtruthing data shows a presence of subdivided single-family homes, which may be a sign of a higher percentage of renters and greater population density than statistical data may indicate. The increased presence of community organizations and building renovations rather than new construction may

be a result of the existing building stock; Chinatown has relatively little existing residential, which explains the lack of community based nonprofits and need for new construction rather than rehabilitation.

Community groups and planners should note that there is potential need for both residential and commercial stabilization strategies in these neighborhoods. A significant aspect of this typology is the presence of ethnic businesses, users, and institutions. This presence alters the ability of researchers to compare similar indicators across all TOD areas, as there is the potential for ethnic gentrification rather than white gentrification, a point that is addressed in the last finding in this section. Further research may investigate the potential for what is colloquially known as gentefication, or the process of individuals with ethnically similar backgrounds investing in an ethnic neighborhood. While this retains the ethnic identity of an area, household income and land value also typically increase. Regardless, anti-displacement actions should span both residential and commercial stabilization efforts.

Subtle, rather than stereotypical, indicators best identify early gentrification

Subtle property changes such as signs of property renovations and landscaping, rather than stereotypical cafes and yoga studios, appeared most regularly and were most indicative of early-stage neighborhood change. One unexpected challenge was that several anticipated indicators of neighborhood change, including those listed on the survey form itself, did not appear in the surveyed neighborhoods. For example, among commercial gentrification indicators, most stations had a lack of overt indicators of commercial gentrification such as yoga studios, high-end coffee shops, and specialty food

stores. Mariachi Plaza, Chinatown, and Hollywood Western each had one to two instances of these things. With respect to residential development, only late-stage gentrification areas such as Hollywood/Western exhibited new construction. Additionally, high rates of public infrastructure investments were also not consistent across areas of early- or late-stage gentrification. While most station areas had a variety of public infrastructure investments such as shelters at bus stops, pedestrian street lights and other street furniture, trash cans and parking meters, bike infrastructure, and road or sidewalk improvements, presence of these items were not consistently found to indicate neighborhood gentrification.

More often, researchers observed renovations that led to increased curb appeal, such as a new coat of paint or new door. These smaller cosmetic changes are also not required to obtain building permits and therefore not accounted for in administrative data. Given the context of the neighborhood, land with signs of future development was another indicator of potential gentrification. The prevalence of vacant lots with indicators of future development, such as fencing and posted permit notices, was high in Hollywood/Western and Chinatown. This may indicate higher-end development and potential gentrification.



Image 9 Vacant lot near Hollywood/Western with indicators of impending development

Ethnically homogenous neighborhoods exhibit fewer signs of perceived gentrification

Another finding was that neighborhoods that are more ethnically and culturally homogenous (Boyle Heights and Chinatown) exhibit fewer signs of non-Hispanic white gentrification. White gentrification is defined as the decrease of ethnic businesses and non-English signage, and increase in the non-Hispanic white population. This can be attributed to either the racial concentration as observed in Sampson and Hwang's (2014) study, or to the presence of ethnic gentrification rather than non-Hispanic white gentrification.

One explanation may be that ethnically segregated neighborhoods tend to experience fewer indicators of gentrification due to the high presence of a minority population. Sampson and Hwang (2014) found that in Chicago, neighborhoods with populations more than 40 percent black exhibited fewer signs of gentrification; neighborhoods experienced gentrification to a certain threshold of racial diversity, while ethnically segregated neighborhoods experienced a slowed or stopped process of gentrification.

Another explanation may be that the neighborhood exhibits signs of ethnic gentrification not demonstrated through indicators seen in other gentrifying neighborhoods. Though ethnic demographics may not show significant increase in the non-Hispanic white population, a quantitative indicator of gentrification, the neighborhood may still exhibit signs of ethnic gentrification. These cases underscore how groundtruthing can add nuance and evidence to an understanding of a neighborhood

reality; simply assessing neighborhood racial disaggregation may not acknowledge other indicators of change.



Image 10 Older, established ethnic business adjacent to newer, renovated ethnic business

Recommendations

The team developed the following recommendations for stakeholders who may want to use groundtruthing:

- Groundtruthing should be context specific, meaning the instrument should vary by neighborhood
- Groundtruthing should be an iterative process, taking place frequently over time
- Groundtruthing should be used in conjunction with data that may not capture subtleties indicative of neighborhood change, such as building permits or census data

In order for groundtruthing to be most useful, it should first be context sensitive and rely on inputs from community groups and others familiar with the neighborhood and

its perceived changes. The groundtruthing instrument should be amended based on the characteristics of the neighborhood in question; these changes must be made because the perceived indicators of gentrification are not uniform, and vary between neighborhoods. Groundtruthing should be tailored for individual neighborhoods based on input from surveyed community members. Incorporating local knowledge will help community groups to address specific concerns they have regarding the nature of the change occurring in their respective neighborhoods. Despite this, an efficient process by which community input would be incorporated into the instrument has yet to be identified, as the method is still in its infancy.

The team also suggests that groundtruthing should be an iterative process to allow for comparative analysis based on a benchmark. It should be performed regularly in a neighborhood, in order to tell a story about neighborhood change. While this study identified some level of neighborhood change, it sought to identify the current characteristics of these neighborhoods with no previous records to compare with this study's results. A better practice would be to establish a baseline through an initial survey, with subsequent surveys monitoring the rate and extent of that neighborhood's change. Over time, the tool can be applied to public sector planning processes, like the formation of a community plan, to quantify community concerns.

Finally, groundtruthing should be used in conjunction with secondary data, such as Census data or parcel information, which cannot capture the more subtle characteristics of gentrification. For example, groundtruthing can identify residential and commercial improvements that do not require permits, such as curb appeal improvements

such as upscale landscaping, xeriscaping, paint, or siding. These indicators show significant investment, and therefore likely economic changes in residents, but will not necessarily be available through any recorded statistical data. It can also identify instances when single-family homes are subdivided and operate as multifamily homes, due to the number of doorbells or mailboxes in front of the home, or businesses, such as childcare or housekeeping services operating in single-family homes. Demographic data and parcel information cannot tell about the quality, relative quality or the recent changes in the quality of the building. Thus, groundtruthing can complement that data.

While the team believes that these recommendations will allow future researchers to achieve greater insight into neighborhood change, it should still be considered that this method of research is relatively new. As a result, the practice of groundtruthing will be subject to further refinement, and these recommendations should be built on by future research. Nonetheless, when communities raise concerns about changes to their neighborhood with nothing but anecdotes, groundtruthing can be a useful tool that brings more systematic analysis to the discussion of gentrification and neighborhood change.

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CHAPTER 4: APPENDICES

Appendix 4.1 Groundtruthing instruction sheet

UCLA TOD Project*

Visual Observations of Neighborhood Change and Gentrification

MATERIALS:

Camera
Smartphone with a compass
UCLA informational letter
Clipboard and pen(s)
Name badge with UCLA logo
Parcel map with directions on where to survey

DRESS CODE: Please dress appropriately for conducting fieldwork as you are representing UCLA.

UCLA gear (no headgear including beanies, hats, visors, etc.) is optional
No shorts or short skirts
No offensive graphics or words
Comfortable shoes for long periods of walking and standing

INTRODUCTION: The purpose of this “groundtruthing” instrument is to gauge whether there are visual signs of neighborhood change that indicate gentrification. Some of the observations are subjective; therefore, it is important to go through training prior to conducting fieldwork.

Provide the following information to any person who asks about your observation activity:

“I am a graduate student in UCLA’s Urban Planning program. I am conducting a visual inventory of this neighborhood as a part of a project to study changes and development around transit stations. The information will be used to inform public agencies, community groups and other interested parties about these changes with the goal of enhancing neighborhood quality and ensuring that all stakeholders benefit.”

Please note that there are **three distinct forms** to note your observations (street segments, and residential parcels and commercial parcels).

INSTRUCTIONS:

Physically walk predetermined neighborhood blocks and note evidence of gentrification and improvement relative to other uses using **Section One**. Parcel or building specific information should be collected in **Section Two**. Each block should be named according to its main corridor (indicated on your map as the street with parcels on both sides).

Bring a **camera** (could use your smart phone camera if it produces decent images). **Code each block** and each **parcel** on the map with its own unique number, and include these numbers on the worksheets that you fill out. **Using compass** on smartphone, stand perpendicular to street segment and note the direction of the street (north, south, east or west).

One whole worksheet should be completed for each block section

Allow for ~1.5 hours of field time.

SECTION ONE: STREET SEGMENT OBSERVATIONS

The purpose of the street segment observations is to assess the characteristics and appearances of street segments. If possible, take photographs relevant to gentrification (e.g., images of older and more established buildings, businesses, and residents; images of newer buildings, businesses, and residents); list addresses for possible later comparison with historical images from Google Street View.

SECTION TWO: PARCEL OBSERVATIONS

The purpose of the parcel observations is to assess the characteristics and appearances of parcels. Using your pre-printed parcel map, carefully walk the block and record your observations for each assigned parcel and building. Use the appropriate form (residential and commercial). Be sure to take a photograph of the assigned buildings.

* Developed by Paul Ong with Silvia Jimenez, Anastasi Loukaitou-Sideris, Karolina Gorska and students from the 2015 Urban Planning Comprehensive Project for the study “Developing a New Methodology for Analyzing Potential Displacement.”

Appendix 4.2 Block groundtruthing form

Block Name/Number: _____ Direction: _____ Parcel Number: _____ Location: _____
 Observer: _____ Physical Observation Date: _____ Start Time ____:____ AM/PM End Time ____:____ AM/PM

SECTION ONE: STREET SEGMENT OBSERVATIONS

1. Rough proportion of block face is (10% increments):

- Single Family Residential _____%
- Multifamily Residential _____%
- Retail _____%
- Commercial (Office Building) _____# _____%
- Institutional (school, hospital, religious): _____# _____%
- Industrial _____%
- Mixed use _____%
- Vacancies: _____%
- Other: _____

2. Existing public infrastructure:

- Bus stop shelter
- Pedestrian street lights
- On-street residential permit parking
- Street furniture (e.g. benches, parklets)
- Bike infrastructure (racks, lanes, etc)
- Public trash cans
- Parking meters
- Newly paved streets and sidewalks, traffic calming
- Other: _____

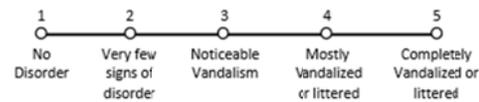
3. Describe any visible people

- How busy _____
- Dominant activity _____
- Dominant ethnicity _____
- Dominant age group _____
- Dominant gender _____
- Dominant life style _____
- Other: _____

4. Extent of visual social diversity (low, medium, high)

- Race/ethnicity _____
- Socioeconomic class _____
- Age _____
- Gender _____
- Social grouping (family, couples, friends, alone) _____
- Other: _____

5. Physical disorder such as garbage, litter, graffiti, or vandalism by degree of observations (circle 1-5):



6. Signage discouraging/controlling disorder

- Neighborhood watch
 - Anti-littering/graffiti
 - Anti-loitering/drug use/vandalism
 - Anti-trespassing
 - Other: _____
- Prevalence: Rare Few Noticeable

7. Describe indicators of ethnic commercial presence:

- Non-English language signs
 - Signs of ethnic business
 - Signs of ethnic goods
 - Signs of ethnic institutions (school, hospital, churches):
 - Other: _____
- Prevalence: Rare Few Noticeable

8. Signs of commercial gentrification (trendy, high-end or upscale, boutique)

- Specialty coffee shops, bars, restaurants
 - Boutique stores
 - Yoga studios and similar recreational facilities
 - High-end grocery stores (e.g., Whole Foods, TJ)
 - Artsy spaces:
 - Other: _____
- Prevalence: Rare Few Noticeable

9. Diversity of commercial activities

- Predominantly older, well-established stores
 - Small majority of older, well-established stores
 - about an equal number of older and newer stores
 - Small majority of newer stores catering to gentrifiers
 - Predominantly newer stores catering to gentrifiers
- Comments: _____

10. Physical signs of residential gentrification

- New construction
 - Recent renovation to unit(s)
-
- 1 ————— 2 ————— 3 ————— 4
 Not visible Minor Cosmetic Moderate Extensive (e.g., structural)
- Upscale landscaping (e.g., fencing)
 - Upscale /luxury and "green" vehicles
 - Other: _____
- Prevalence: Rare Few Noticeable

11. Physical signs of commercial gentrification

- New construction
 - Recent renovation to unit(s)
-
- 1 ————— 2 ————— 3 ————— 4
 Not visible Minor Cosmetic Moderate Extensive (e.g., structural)
- Upscale/trendy landscaping (e.g., patio furniture, plant type)
 - Upscale/trendy store front
 - Upscale/trendy signage, ads, displays
 - Other: _____
- Prevalence: Rare Few Noticeable

12. Describe public art and aesthetics: _____

14. Additional notes on block overview [e.g., small dogs, dog waster bags]: _____

Appendix 4.3 Residential parcel groundtruthing form

Observer: _____ Physical Observation Date: _____ Start Time ____:____ AM/PM Station: _____

SECTION TWO: RESIDENTIAL PARCEL OBSERVATIONS

<p>APN/Parcel # _____ Street Address _____</p> <ol style="list-style-type: none"> 1. Building type and units: <ul style="list-style-type: none"> <input type="checkbox"/> Single family <input type="checkbox"/> 2-4 multifamily <input type="checkbox"/> Non-residential <input type="checkbox"/> 5 or more multifamily <input type="checkbox"/> Unable to judge: _____ 2. Occupancy status <ul style="list-style-type: none"> <input type="checkbox"/> Occupied <input type="checkbox"/> Partially occupied: _____ <input type="checkbox"/> Not occupied: <ul style="list-style-type: none"> Signs of abandoned: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unable to judge: _____ 3. Building signs and markings <ul style="list-style-type: none"> <input type="checkbox"/> For sale signs: _____ <input type="checkbox"/> For rent signs: _____ <input type="checkbox"/> Eviction notices: _____ <input type="checkbox"/> Other (explain): _____ 4. Building characteristics <ul style="list-style-type: none"> <input type="checkbox"/> Newly constructed <input type="checkbox"/> Older building: <ul style="list-style-type: none"> <input type="checkbox"/> Renovated <input type="checkbox"/> Not renovated <input type="checkbox"/> Ongoing renovation 5. Overall building appearance <div style="text-align: center; margin-top: 5px;"> </div> 6. Physical Signs of Residential Gentrification <ul style="list-style-type: none"> <input type="checkbox"/> New construction <input type="checkbox"/> Recent renovation to unit(s) <div style="text-align: center; margin-top: 5px;"> </div> <input type="checkbox"/> Upscale/trendy landscaping (e.g., fencing, plant types) <input type="checkbox"/> Upscale/luxury and "green" vehicles <input type="checkbox"/> Other: _____ <p>Prevalence: <input type="checkbox"/> Rare <input type="checkbox"/> Few <input type="checkbox"/> Noticeable</p> 7. Building appearance relative to surroundings <ul style="list-style-type: none"> <input type="checkbox"/> Roughly consistent <input type="checkbox"/> Out of place, higher-end <input type="checkbox"/> Out of place, lower-end <input type="checkbox"/> Unable to judge: _____ 8. Notes on building and outdoor space: _____ _____ _____ 9. Photo number(s) or range: _____ _____ 	<p>APN/Parcel # _____ Street Address _____</p> <ol style="list-style-type: none"> 1. Building type and units: <ul style="list-style-type: none"> <input type="checkbox"/> Single family <input type="checkbox"/> 2-4 multifamily <input type="checkbox"/> Non-residential <input type="checkbox"/> 5 or more multifamily <input type="checkbox"/> Unable to judge: _____ 2. Occupancy status <ul style="list-style-type: none"> <input type="checkbox"/> Occupied <input type="checkbox"/> Partially occupied: _____ <input type="checkbox"/> Not occupied: <ul style="list-style-type: none"> Signs of abandoned: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unable to judge: _____ 3. Building signs and markings <ul style="list-style-type: none"> <input type="checkbox"/> For sale signs: _____ <input type="checkbox"/> For rent signs: _____ <input type="checkbox"/> Eviction notices: _____ <input type="checkbox"/> Other (explain): _____ 4. Building characteristics <ul style="list-style-type: none"> <input type="checkbox"/> Newly constructed <input type="checkbox"/> Older building: <ul style="list-style-type: none"> <input type="checkbox"/> Renovated <input type="checkbox"/> Not renovated <input type="checkbox"/> Ongoing renovation 5. Overall building appearance <div style="text-align: center; margin-top: 5px;"> </div> 6. Physical Signs of Residential Gentrification <ul style="list-style-type: none"> <input type="checkbox"/> New construction <input type="checkbox"/> Recent renovation to unit(s) <div style="text-align: center; margin-top: 5px;"> </div> <input type="checkbox"/> Upscale/ trendy landscaping (e.g., fencing, plant type) <input type="checkbox"/> Upscale/luxury and "green" vehicles <input type="checkbox"/> Other: _____ <p>Prevalence: <input type="checkbox"/> Rare <input type="checkbox"/> Few <input type="checkbox"/> Noticeable</p> 7. Building appearance relative to surroundings <ul style="list-style-type: none"> <input type="checkbox"/> Roughly consistent <input type="checkbox"/> Out of place, higher-end <input type="checkbox"/> Out of place, lower-end <input type="checkbox"/> Unable to judge: _____ 8. Notes on building and outdoor space: _____ _____ _____ 9. Photo number(s) or range: _____ _____
--	--

Appendix 4.4 Commercial parcel groundtruthing form

Observer: _____ Physical Observation Date: _____ Start Time ____:____ AM/PM Station: _____

SECTION TWO: COMMERCIAL PARCEL OBSERVATIONS

APN/Parcel # _____ Street Address _____

- Building type and units:
 - Multi-story ____ # stories
 - Stand-alone
 - Strip mall
 - Unable to judge: _____
- Building Use (e.g., office, retail, minimart): _____
- Occupancy status
 - Occupied
 - Partially occupied: _____
 - Not occupied:
 - Signs of abandoned: Yes No
 - Unable to judge: _____
- Building signs and markings
 - Property "For sale" signs: _____
 - Property "For rent" signs: _____
 - Eviction notices: _____
 - Upscale/trendy signage, ads, displays
 - Other (explain): _____
- Building characteristics
 - Newly constructed
 - Older building:
 - Renovated Not renovated
 - Ongoing renovation
- Overall building appearance
- Physical Signs of Commercial Gentrification
 - New construction
 - Recent renovation to unit(s)
 - Upscale/trendy landscaping (e.g., patio furniture, plant types)
 - Upscale/trendy store front
 - Other: _____
 - Prevalence: Rare Few Noticeable
- Building appearance relative to surroundings
 - Roughly consistent
 - Out of place, higher-end
 - Out of place, lower-end
 - Unable to judge: _____
- Notes on building and outdoor space: _____
- Photo number(s) or range: _____

APN/Parcel # _____ Street Address _____

- Building type and units:
 - Multi-story ____ # stories
 - Stand-alone
 - Strip mall
 - Unable to judge: _____
- Building Use (e.g., office, retail, minimart): _____
- Occupancy status
 - Occupied
 - Partially occupied: _____
 - Not occupied:
 - Signs of abandoned: Yes No
 - Unable to judge: _____
- Building signs and markings
 - Property "For sale" signs: _____
 - Property "For rent" signs: _____
 - Eviction notices: _____
 - Upscale/trendy signage, ads, displays
 - Other (explain): _____
- Building characteristics
 - Newly constructed
 - Older building:
 - Renovated Not renovated
 - Ongoing renovation
- Overall building appearance
- Physical Signs of Commercial Gentrification
 - New construction
 - Recent renovation to unit(s)
 - Upscale/trendy landscaping (e.g., patio furniture, plant types)
 - Upscale/trendy store front
 - Other: _____
 - Prevalence: Rare Few Noticeable
- Building appearance relative to surroundings
 - Roughly consistent
 - Out of place, higher-end
 - Out of place, lower-end
 - Unable to judge: _____
- Notes on building and outdoor space: _____
- Photo number(s) or range: _____

Appendix 4.5 UCLA consent letter

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



UCLA

SANTA BARBARA • SANTA CRUZ

CENTER FOR THE STUDY OF INEQUALITY
LUSKIN SCHOOL OF PUBLIC AFFAIRS
6368 PUBLIC AFFAIRS BUILDING
BOX 951656
LOS ANGELES, CALIFORNIA 90095-1656

15 March 2015

To Whom It May Concern,

Students at the UCLA Center for the Study of Inequality are conducting a visual inventory of this neighborhood as part of their Urban Planning Master's Program comprehensive research project. This project examines changes and developments around transit stations in the Los Angeles area. The information will be used to inform public agencies, community groups and other interested parties about these changes and developments. The goal of the study is to enhance neighborhood quality and ensure that all stakeholders benefit from transit development.

If you have questions about the credentials of the student, please contact the UCLA Department of Urban Planning at the Luskin School of Public Affairs at: 3250 Public Affairs Building, Box 951656, Los Angeles, CA 90095. Or alternatively, questions can be answered over the phone at (310) 825-4025.

If you have questions about the project, please contact me at 818-270-0497.

Thank you.

Sincerely yours,

A handwritten signature in black ink that reads "Silvia Jiménez".

Silvia Jiménez
Assistant Director,
Center for the Study of Inequality

Department of Urban Planning
Luskin School of Public Affairs
University of California Los Angeles
3250 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656
Phone: (310) 825-4025

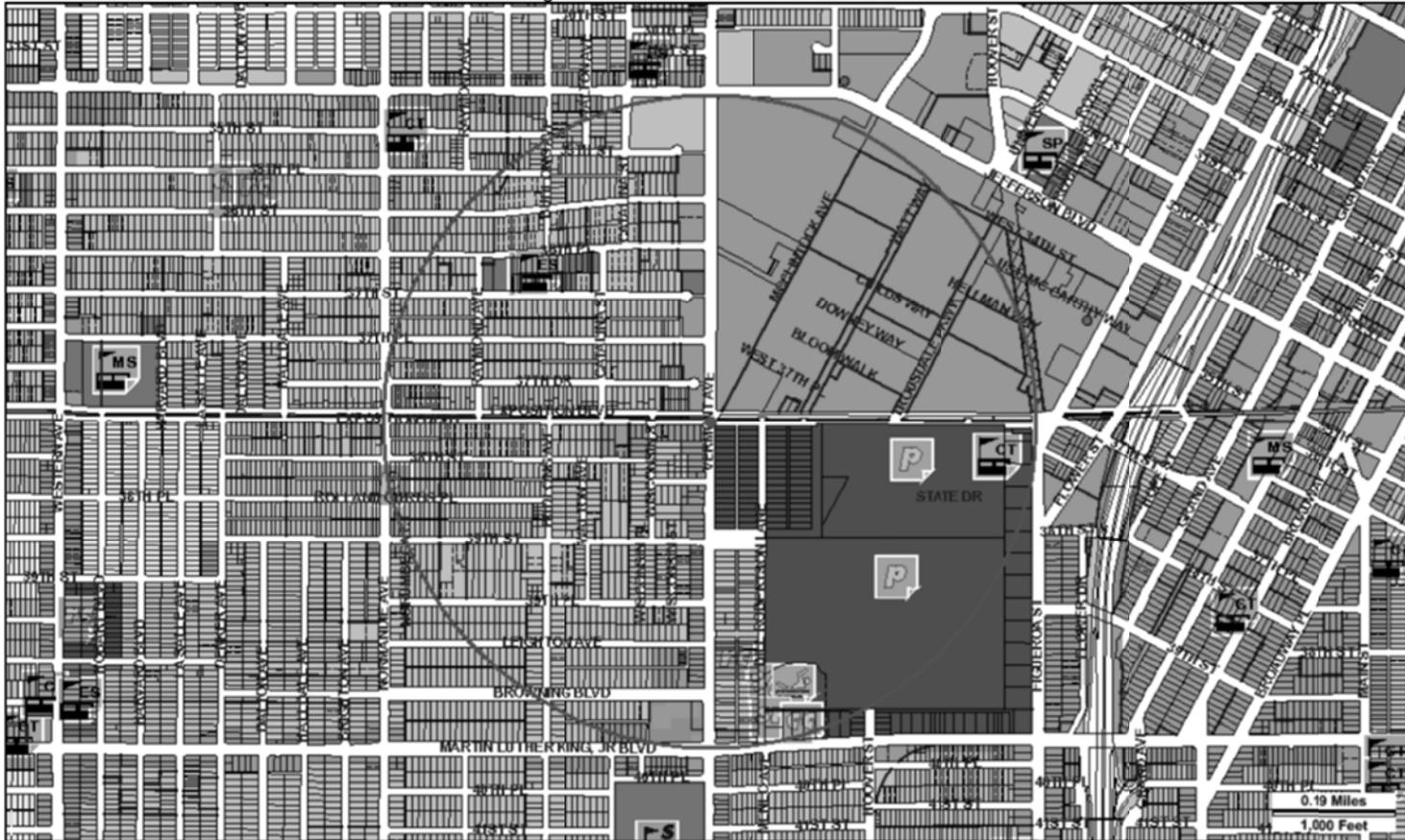


Chinatown Station
(College St/Spring St)

(1/2 mile radius)



Streets Copyright (c) Thomas Brothers Maps, Inc.



Vermont/Expo Station (1/2 mile radius)



Streets Copyright (c) Thomas Brothers Maps, Inc.



Highland Park Station
(Marmion/Ave 58)

(1/2 mile radius)



Streets Copyright (c) Thomas Brothers Maps, Inc.



Hollywood/Western Station (1/2 mile radius)



Streets Copyright (c) Thomas Brothers Maps, Inc.



Mariachi Plaza Station
(Boyle Ave/1st St)

(1/2 mile radius)



Streets Copyright (c) Thomas Brothers Maps, Inc.

LEGEND

GENERALIZED ZONING

- OS, GW
- A, RA
- RE, RS, R1, RU, RZ, RW1
- R2, RD, RMP, RW2, R3, RAS, R4, R5
- CR, C1, C1.5, C2, C4, C5, CW ADP, LASED, CEC, USC, PVSP
- CM, MR, WC, CCS, UV, UI, UC, M1, M2, LAX, M3, SL
- P, PB
- PF
- HILLSIDE

GENERAL PLAN LAND USE

LAND USE

RESIDENTIAL

- Minimum Residential
- Very Low / Very Low I Residential
- Very Low II Residential
- Low / Low I Residential
- Low II Residential
- Low Medium / Low Medium I Residential
- Low Medium II Residential
- Medium Residential
- High Medium Residential
- High Density Residential
- Very High Medium Residential

COMMERCIAL

- Limited Commercial
- Limited Commercial - Mixed Medium Residential
- Highway Oriented Commercial
- Highway Oriented and Limited Commercial
- Highway Oriented Commercial - Mixed Medium Residential
- Neighborhood Office Commercial
- Community Commercial
- Community Commercial - Mixed High Residential
- Regional Center Commercial

FRAMEWORK

COMMERCIAL

- Neighborhood Commercial
- General Commercial
- Community Commercial
- Regional Mixed Commercial

INDUSTRIAL

- Commercial Manufacturing
- Limited Manufacturing
- Light Manufacturing
- Heavy Manufacturing
- Hybrid Industrial

PARKING

- Parking Buffer

PORT OF LOS ANGELES

- General / Bulk Cargo - Non Hazardous (Industrial / Commercial)
- General / Bulk Cargo - Hazard
- Commercial Fishing
- Recreation and Commercial
- Intermodal Container Transfer Facility Site

LOS ANGELES INTERNATIONAL AIRPORT

- Airport Landside
- Airport Airside
- Airport Northside

OPEN SPACE / PUBLIC FACILITIES

- Open Space
- Public / Open Space
- Public / Quasi-Public Open Space
- Other Public Open Space
- Public Facilities

INDUSTRIAL

- Limited Industrial
- Light Industrial

POINTS OF INTEREST

- Alternative Youth Hostel (Proposed)
- Animal Shelter
- Area Library
- Area Library (Proposed)
- Bridge
- Campground
- Campground (Proposed)
- Cemetery
- Church
- City Hall
- Community Center
- Community Library
- Community Library (Proposed Expansion)
- Community Library (Proposed)
- Community Park
- Community Park (Proposed Expansion)
- Community Park (Proposed)
- Community Transit Center
- Convalescent Hospital
- Correctional Facility
- Cultural / Historic Site (Proposed)
- Cultural / Historical Site
- Cultural Arts Center
- DMV DMV Office
- DWP DWP
- DWP Pumping Station
- Equestrian Center
- Fire Department Headquarters
- Fire Station
- Fire Station (Proposed Expansion)
- Fire Station (Proposed)
- Fire Supply & Maintenance
- Fire Training Site
- Fireboat Station
- Health Center / Medical Facility
- Helistop
- Historic Monument
- Historical / Cultural Monument
- Horsekeeping Area
- Horsekeeping Area (Proposed)
- Horticultural Center
- Hospital
- Hospital (Proposed)
- House of Worship
- Important Ecological Area
- Important Ecological Area (Proposed)
- Interpretive Center (Proposed)
- Junior College
- MTA / Metrolink Station
- MTA Station
- MTA Stop
- MWD MWD Headquarters
- Maintenance Yard
- Municipal Office Building
- Municipal Parking Lot
- Neighborhood Park
- Neighborhood Park (Proposed Expansion)
- Neighborhood Park (Proposed)
- Oil Collection Center
- Parking Enforcement
- Police Headquarters
- Police Station
- Police Station (Proposed Expansion)
- Police Station (Proposed)
- Police Training site
- Post Office
- Power Distribution Station
- Power Distribution Station (Proposed)
- Power Receiving Station
- Power Receiving Station (Proposed)
- Private College
- Private Elementary School
- Private Golf Course
- Private Golf Course (Proposed)
- Private Junior High School
- Private Pre-School
- Private Recreation & Cultural Facility
- Private Senior High School
- Private Special School
- Public Elementary (Proposed Expansion)
- Public Elementary School
- Public Elementary School (Proposed)
- Public Golf Course
- Public Golf Course (Proposed)
- Public Housing
- Public Housing (Proposed Expansion)
- Public Junior High School
- Public Junior High School (Proposed)
- Public Middle School
- Public Senior High School
- Public Senior High School (Proposed)
- Pumping Station
- Pumping Station (Proposed)
- Refuse Collection Center
- Regional Library
- Regional Library (Proposed Expansion)
- Regional Library (Proposed)
- Regional Park
- Regional Park (Proposed)
- Residential Plan Development
- Scenic View Site
- Scenic View Site (Proposed)
- School District Headquarters
- School Unspecified Loc/Type (Proposed)
- Skill Center
- Social Services
- Special feature
- Special Recreation (a)
- Special School Facility
- Special School Facility (Proposed)
- Steam Plant
- Surface Mining
- Trail & Assembly Area
- Trail & Assembly Area (Proposed)
- Utility Yard
- Water Tank Reservoir
- Wildlife Migration Corridor
- Wildlife Preserve Gate

500 FT. SCHOOL/PARK ZONE

- Existing School/Park Site
- Planned School/Park Site
- Inside 500 Ft. Buffer

- | | |
|----------------------|----------------------------------|
| Aquatic Facilities | Opportunity School |
| Beaches | Other Facilities |
| Charter School | Park / Recreation Centers |
| Child Care Centers | Parks |
| Elementary School | Performing / Visual Arts Centers |
| Golf Course | Recreation Centers |
| High School | Span School |
| Historic Sites | Special Education School |
| Horticulture/Gardens | Senior Citizen Centers |
| Middle School | Skate Parks |

COASTAL ZONES

- Dual Jurisdictional Coastal Zone
- Calvo Exclusion Area
- Coastal Zone Commission Authority

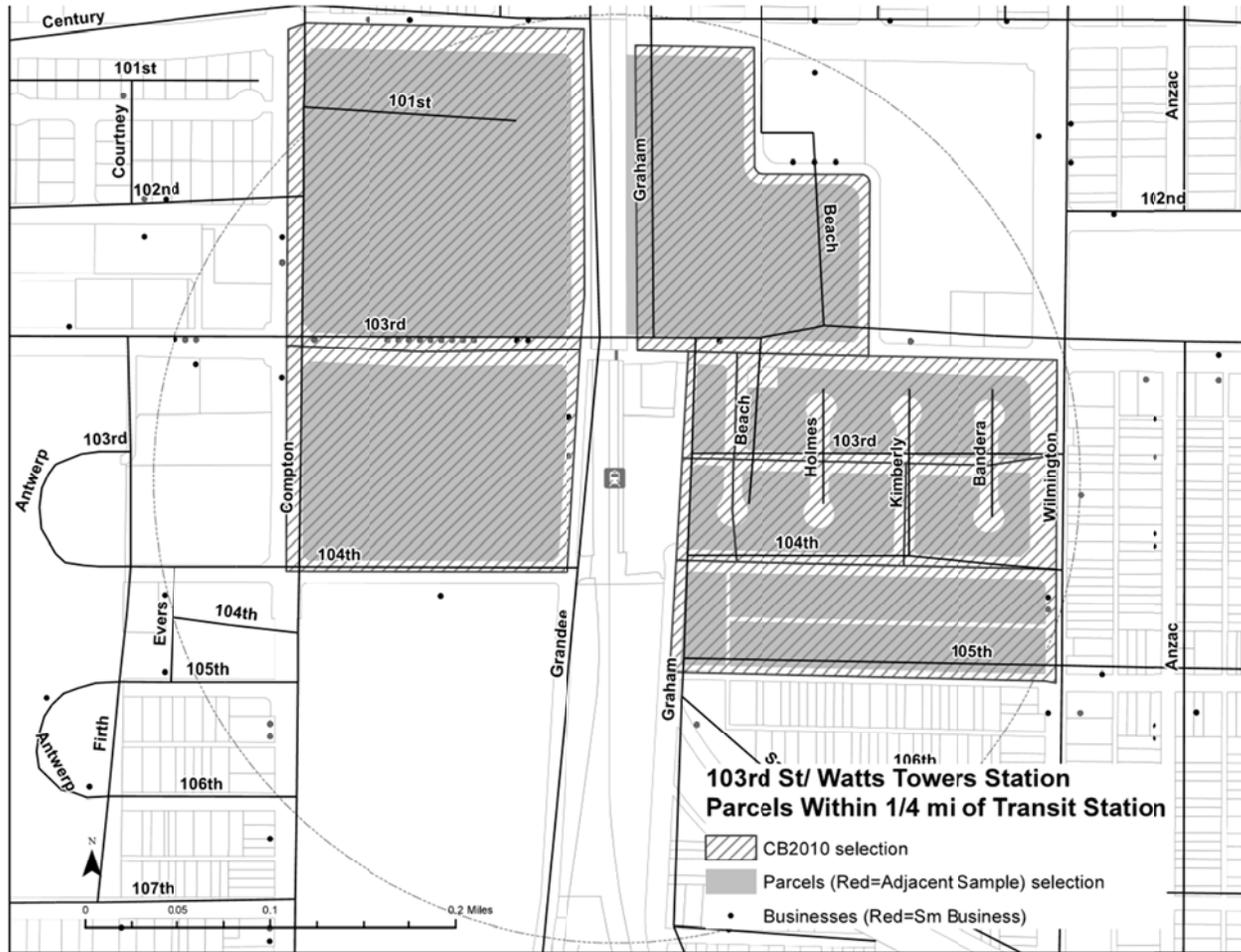
OTHER SYMBOLS

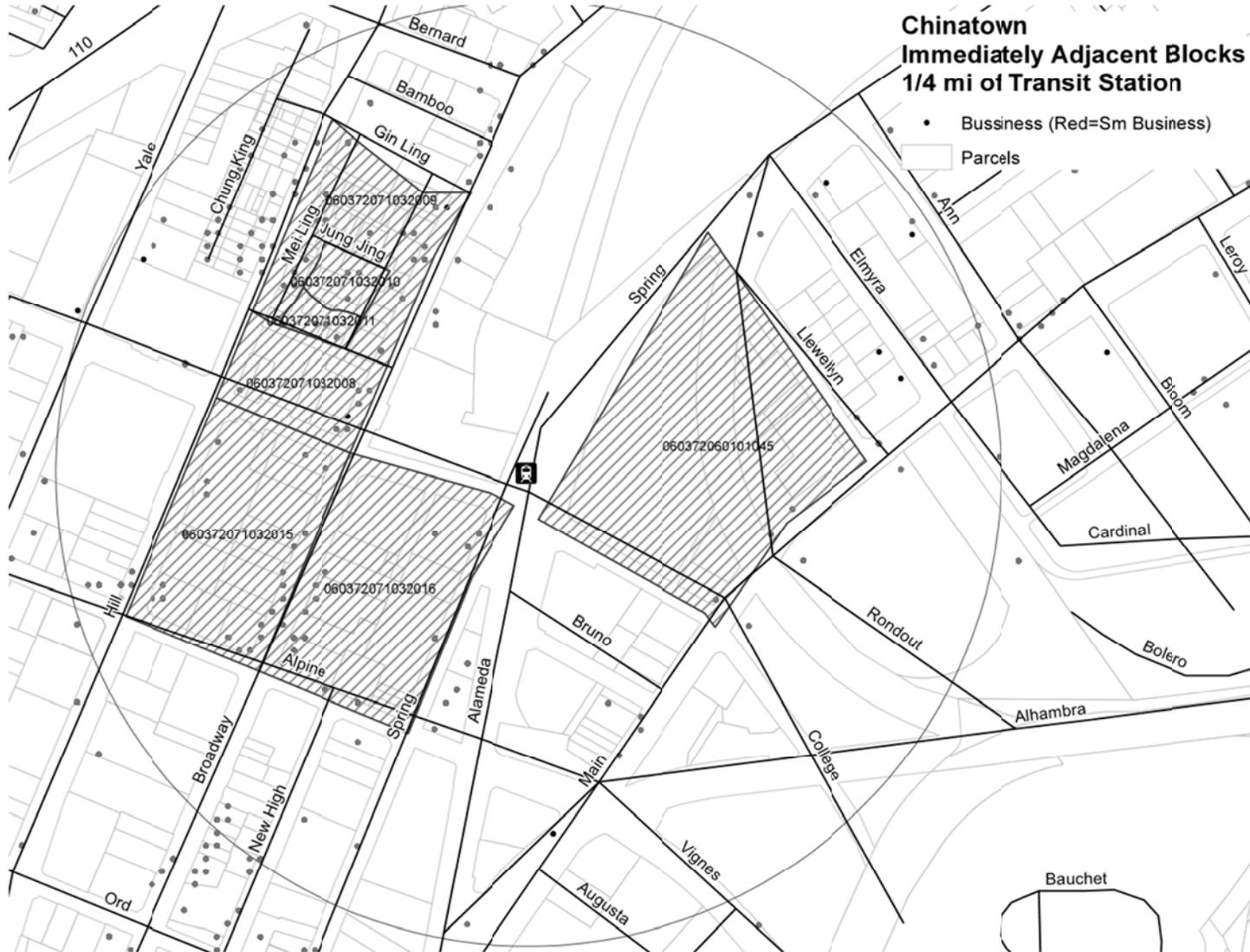
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| Lot Line | Airport Hazard Zone | Flood Zone |
| Tract Line | Census Tract | Hazardous Waste |
| Lot Cut | Coastal Zone | High Wind Zone |
| Easement | Council District | Hillside Grading |
| Zone Boundary | LADBS District Office | Historic Preservation Overlay Zone |
| Building Line | Downtown Parking | Specific Plan Area |
| Lot Split | Fault Zone | Very High Fire Hazard Severity Zone |
| Community Driveway | Fire District No. 1 | Oil Wells |
| Tract Map | | |
| Parcel Map | | |
| Lot Ties | | |
| Building Outlines | | |

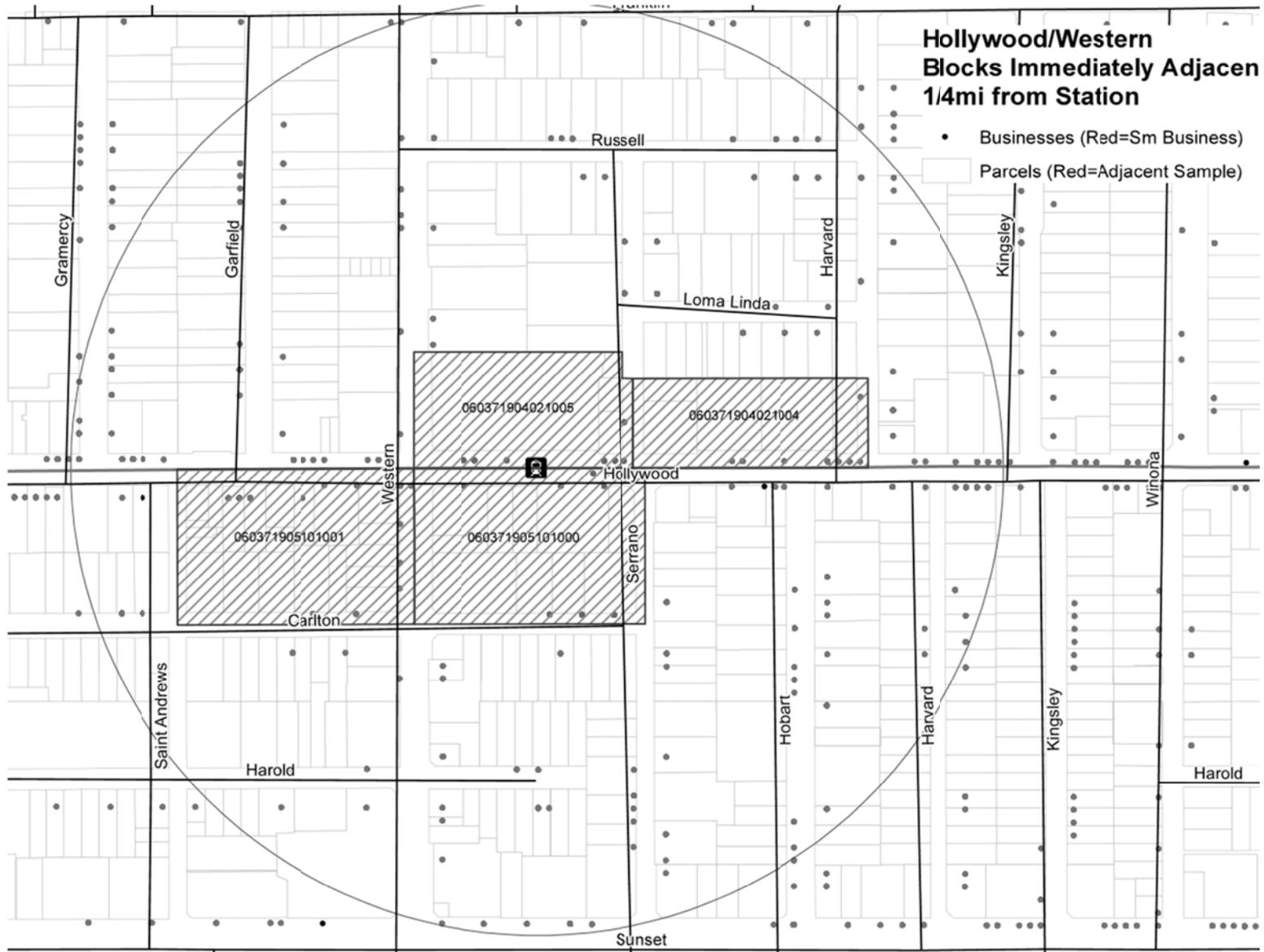
POINTS OF INTEREST

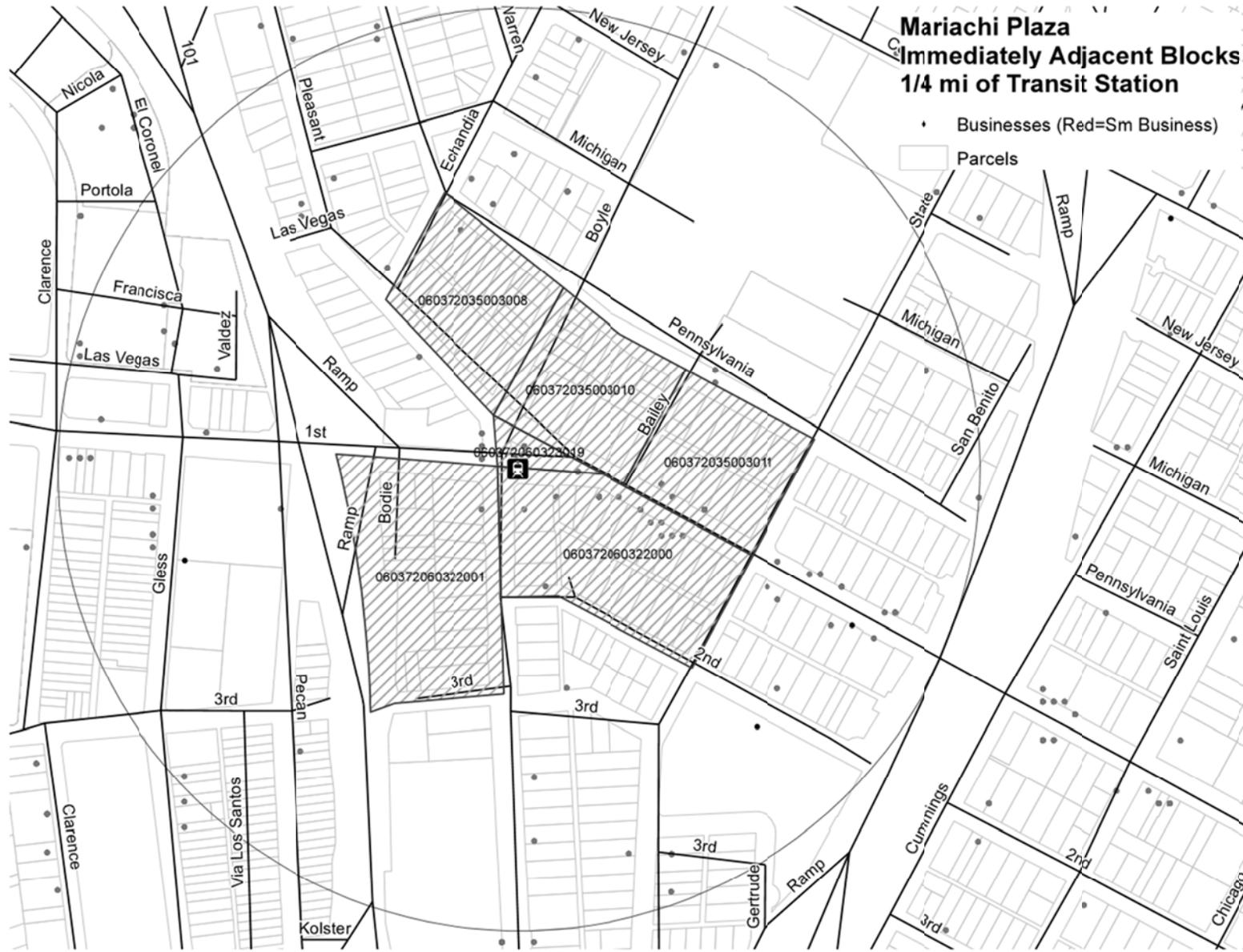
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| Alternative Youth Hostel (Proposed) | Horticultural Center | Public Elementary School |
| Animal Shelter | Hospital | Public Elementary School (Proposed) |
| Area Library | Hospital (Proposed) | Public Golf Course |
| Area Library (Proposed) | House of Worship | Public Golf Course (Proposed) |
| Bridge | Important Ecological Area | Public Housing |
| Campground | Important Ecological Area (Proposed) | Public Housing (Proposed Expansion) |
| Campground (Proposed) | Interpretive Center (Proposed) | Public Junior High School |
| Cemetery | Junior College | Public Junior High School (Proposed) |
| Church | MTA / Metrolink Station | Public Middle School |
| City Hall | MTA Station | Public Senior High School |
| Community Center | MTA Stop | Public Senior High School (Proposed) |
| Community Library | MWD MWD Headquarters | Pumping Station |
| Community Library (Proposed Expansion) | Maintenance Yard | Pumping Station (Proposed) |
| Community Library (Proposed) | Municipal Office Building | Refuse Collection Center |
| Community Park | Municipal Parking lot | Regional Library |
| Community Park (Proposed Expansion) | Neighborhood Park | Regional Library (Proposed Expansion) |
| Community Park (Proposed) | Neighborhood Park (Proposed Expansion) | Regional Library (Proposed) |
| Community Transit Center | Neighborhood Park (Proposed) | Regional Park |
| Convalescent Hospital | Oil Collection Center | Regional Park (Proposed) |
| Correctional Facility | Parking Enforcement | Residential Plan Development |
| Cultural / Historic Site (Proposed) | Police Headquarters | Scenic View Site |
| Cultural / Historical Site | Police Station | Scenic View Site (Proposed) |
| Cultural Arts Center | Police Station (Proposed Expansion) | School District Headquarters |
| DMV DMV Office | Police Station (Proposed) | School Unspecified Loc/Type (Proposed) |
| DWP DWP | Police Training site | Skill Center |
| DWP Pumping Station | Post Office | Social Services |
| Equestrian Center | Power Distribution Station | Special Feature |
| Fire Department Headquarters | Power Distribution Station (Proposed) | Special Recreation (a) |
| Fire Station | Power Receiving Station | Special School Facility |
| Fire Station (Proposed Expansion) | Power Receiving Station (Proposed) | Special School Facility (Proposed) |
| Fire Station (Proposed) | Private College | Steam Plant |
| Fire Supply & Maintenance | Private Elementary School | Surface Miniag |
| Fire Training Site | Private Golf Course | Trail & Assembly Area |
| Fireboat Station | Private Golf Course (Proposed) | Trail & Assembly Area (Proposed) |
| Health Center / Medical Facility | Private Junior High School | Utility Yard |
| Heliport | Private Pre-School | Water Tank Reservoir |
| Historical Monument | Private Recreation & Cultural Facility | Wildlife Migration Corridor |
| Historical / Cultural Monument | Private Senior High School | Wildlife Preserve Gate |
| Horsekeeping Area | Private Special School | |
| Horsekeeping Area (Proposed) | Public Elementary (Proposed Expansion) | |

Appendix 4.7 Block maps by station

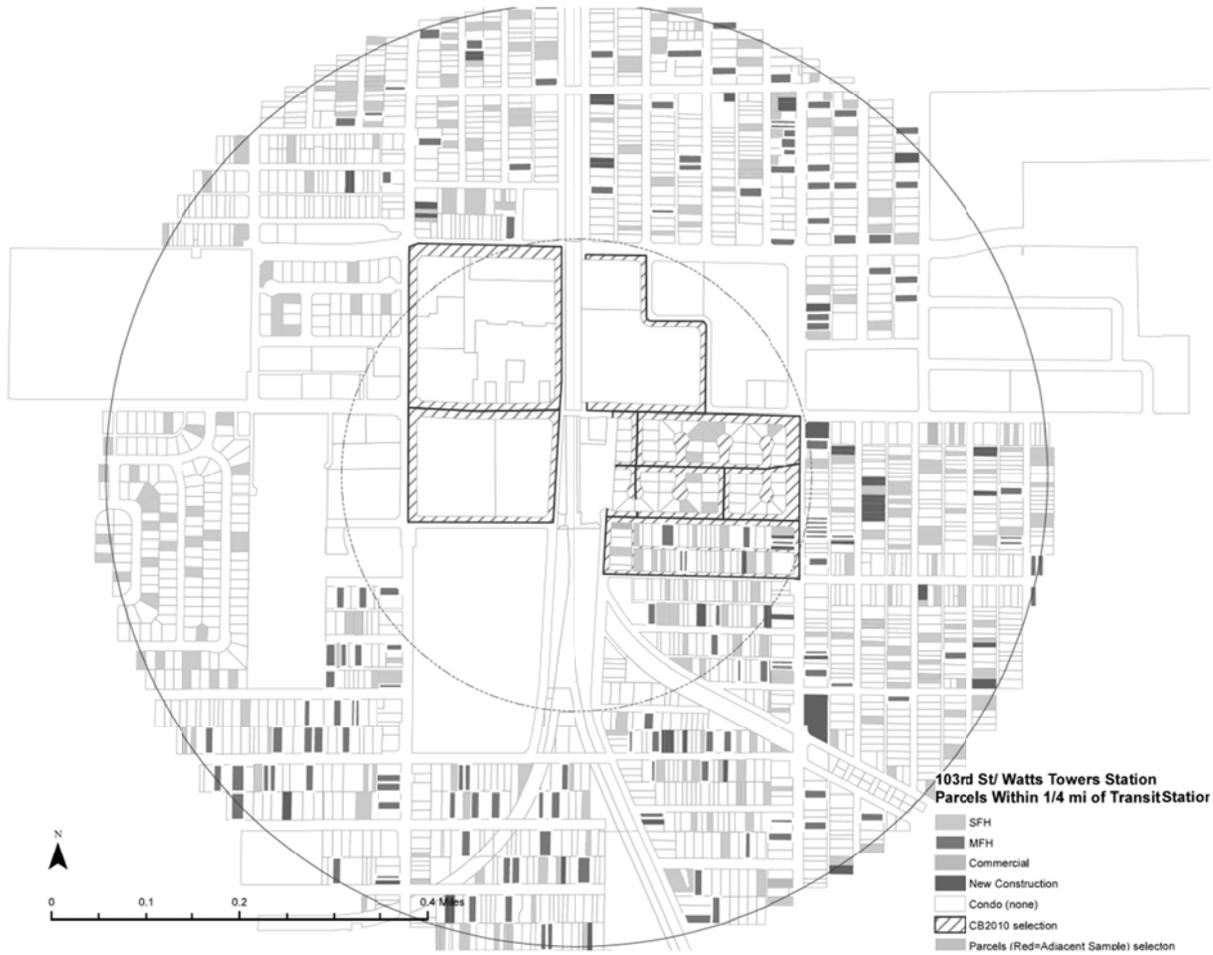






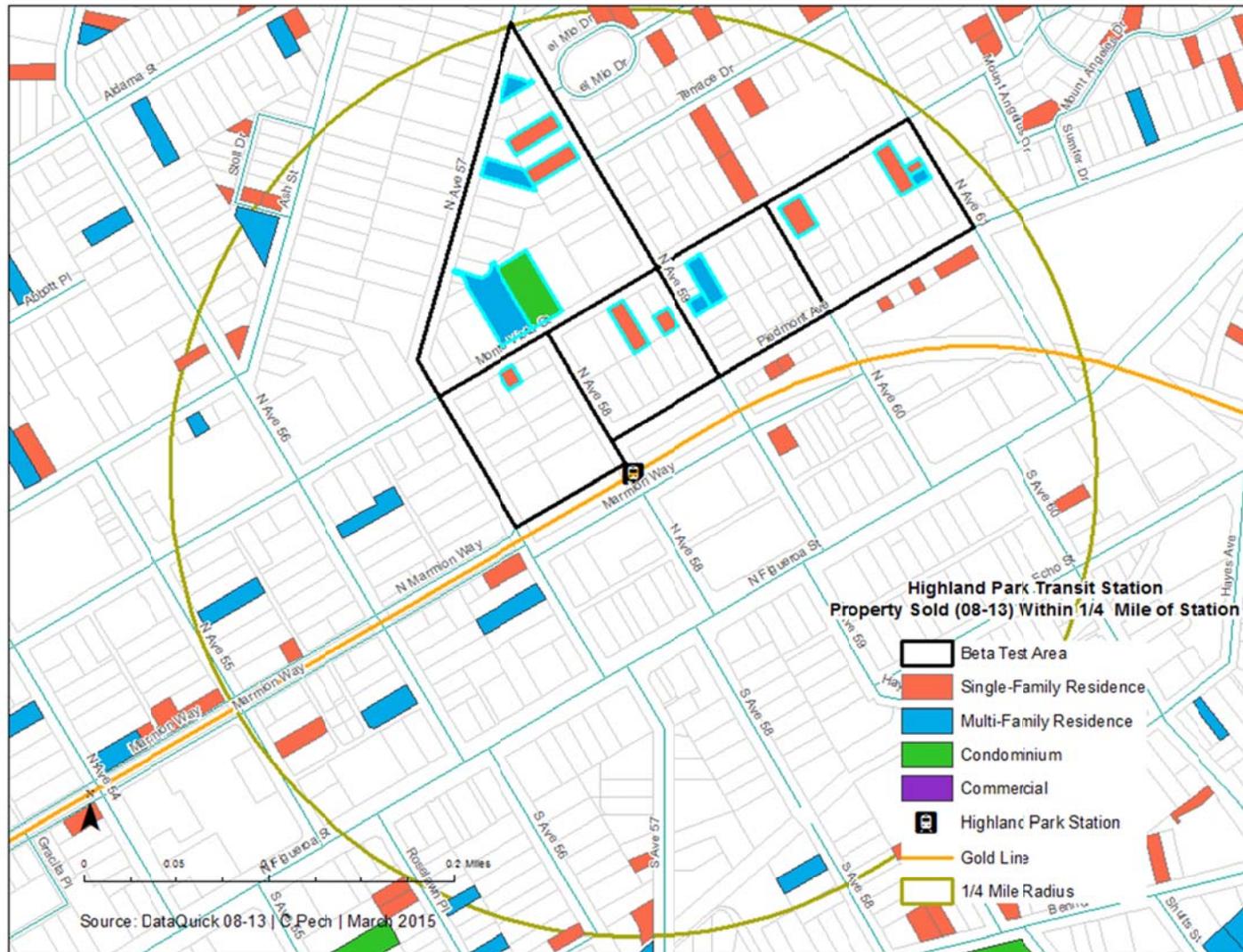


Appendix 4.8: Parcel maps by station

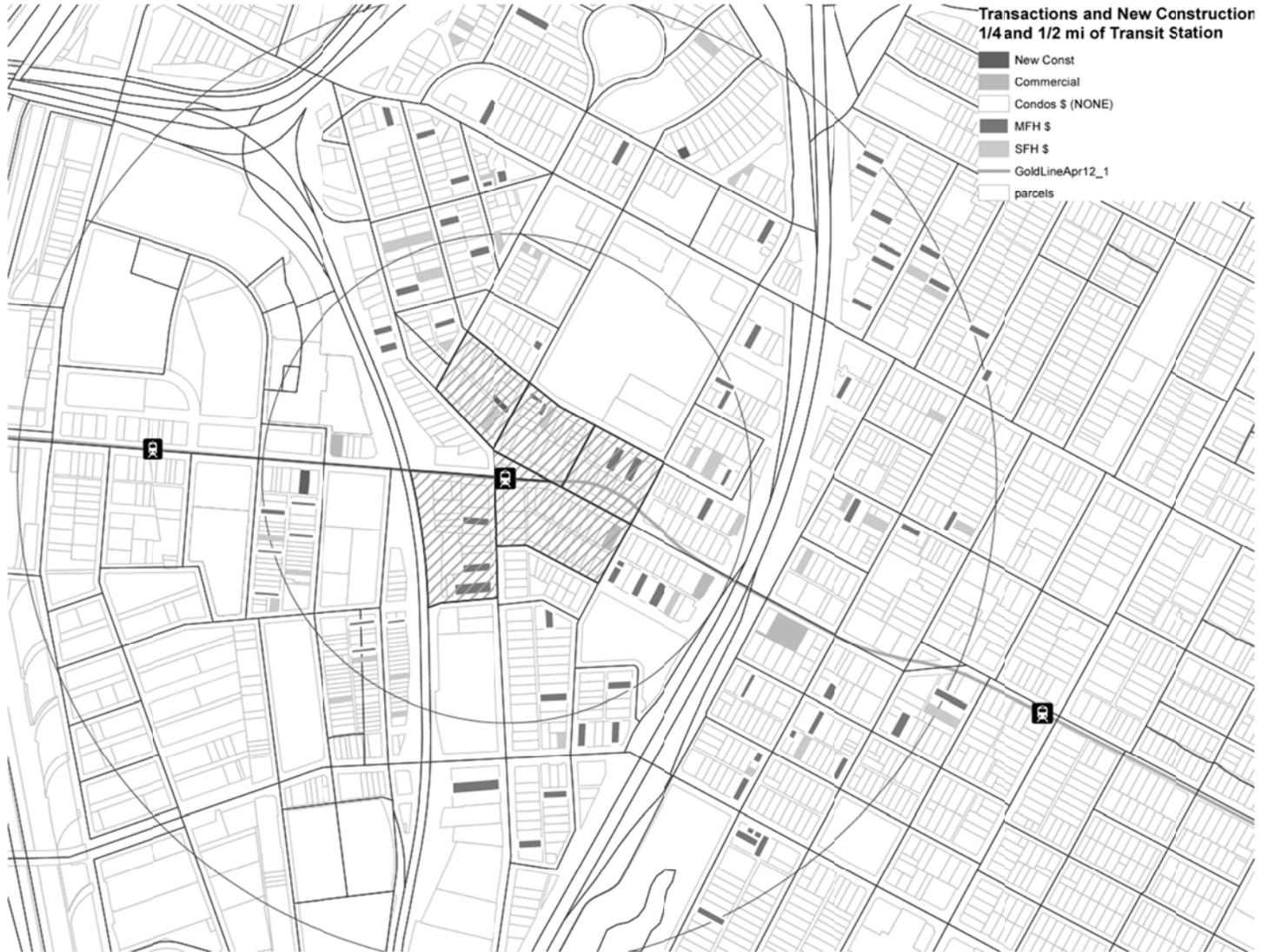












Appendix 4.9: Demographics by station

	Hollywood/Western	Mariachi Plaza	Expo Vermont	Highland Park	Chinatown	103rd/Watts Towers	TOD average	County average
Income (2013)	45,600	37,924	34,152	52,932	34,088	40,376	51,471	81,416
Change in income 90-2013	-10%	-13%	-17%	-1%	-14%	13%	9%	-5%
Change in income 00-2013	-1%	-7%	-20%	-7%	-13%	-9%	7%	-6%
Change in income 90-00	-9%	-6%	3%	7%	-1%	24%	2%	1%
Largest race/ethnic group	White	Hispanic	Hispanic	Hispanic	Asian	Hispanic	Hispanic	Hispanic
NHW	48%	2%	12%	9%	9%	1%	15%	28%
% point change in NHW	-1%	0%	5%	-4%	1%	0%	-3%	-13%
# HH	9,937	3,235	3,190	4,384	2,700	2,894	4,329	N/A
% HH with Child	19%	49%	48%	39%	29%	56%	30%	37%
% Renter	94%	86%	85%	72%	93%	63%	81%	53%
% Moderately Burdened (30%-50%)	22%	24%	21%	26%	26%	25%	27%	26%
% Severely Burdened (50%+)	37%	39%	41%	31%	27%	42%	31%	30%
Ellis Act Evictions 2007-2014	6	0	7	2	4	0	11	
Condo Conversions	11	5	0	5	0	0	44	
Jobs/Housing Balance	0.78	1.22	4.33	0.38	3.45	0.53	3.76	
# Businesses	1,338	558	335	536	1,101	266	1,536	
# Churches	19	28	8	21	18	28	20	

# HS Nonprofits	13	23	8	9	13	11	13	
Yearly Station Traffic Volume (All Boardings and Alightings)	3,327,704	616,151	1,541,988	1,573,073	1,119,344	1,178,918	2,723,794	
SNAP	Yes	Draft	Draft	Yes	Yes	Draft		

Appendix 4.10: Groundtruthing results by station

	103rd St/ Watts	Chinatown	Expo/Vermont	Highland Park	Hollywood/ Western	Mariachi Plaza	Total
# Blocks	20	17	18	16	15	12	14.33
Total Blocks	98						
Land Uses							Average
Single Family	40.00%	0.00%	11.67%	48.13%	0.00%	32.08%	26.74%
Multifamily	28.00%	0.00%	38.33%	41.25%	45.33%	12.08%	32.89%
Retail	9.00%	37.06%	0.00%	0.94%	15.33%	31.67%	15.98%
Commercial	1.00%	0.29%	2.22%	0.00%	0.00%	0.00%	0.00%
Institutional	17.00%	7.06%	25.56%	4.69%	1.33%	12.50%	6.17%
Industrial	0.00%	4.12%	0.00%	0.00%	0.00%	0.00%	0.00%
Mixed-Use	0.00%	26.18%	0.00%	0.00%	10.67%	4.17%	4.94%
Vacant park)	5.00%	25.29%	0.00%	0.00%	15.33%	7.50%	7.61%
	0.00%	0.00%	22.22%	5.00%	12.00%	0.00%	5.67%
Public infrastructure							Average
Bus Stop Shelter	20.00%	5.88%	22.22%	6.25%	6.67%	0.00%	4.31%
Ped. Street Lights	10.00%	47.06%	33.33%	0.00%	20.00%	83.33%	34.44%
Residential permit parking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Street Furniture	25.00%	52.94%	22.22%	0.00%	6.67%	16.67%	7.78%
Bike Infra	30.00%	5.88%	11.11%	0.00%	26.67%	33.33%	20.00%
Public Trash Cans	15.00%	52.94%	33.33%	0.00%	20.00%	50.00%	23.33%
Parking Meters	0.00%	41.18%	11.11%	0.00%	40.00%	33.33%	24.44%
Street Improvements	55.00%	17.65%	33.33%	93.75%	0.00%	33.33%	42.36%
Visible People							Average
Busy	10.00%	0.00%	0.00%	0.00%	6.67%	16.67%	7.78%
Moderately busy	20.00%	41.18%	16.67%	0.00%	40.00%	33.33%	24.44%
Not busy	45.00%	58.82%	83.33%	100.00%	53.33%	50.00%	67.78%
Ethnicity				Latino			
Physical Disorder							Average
Overall Rating	2.25	2.24	2.11	2.19	2.27	2.50	2.32
Neighborhood watch	10.00%	0.00%	5.56%	0.00%	0.00%	0.00%	0.00%
Anti- littering/graffiti	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Anti-loitering/drug use	5.00%	0.00%	0.00%	0.00%	13.33%	0.00%	4.44%
Anti-trespassing	55.00%	0.00%	5.56%	12.50%	20.00%	50.00%	27.50%
Other Signage	0.00%	0.00%	5.56%	37.50%	0.00%	0.00%	12.50%
Other Notes				"Beware of Dog" and "Security Company"			
Ethnic Commercial Presence							Average
Non-english signs	10.00%	82.35%	N/A	N/A	6.67%	50.00%	28.33%
Ethnic businesses	5.00%	64.71%	N/A	N/A	20.00%	33.33%	26.67%
Ethnic goods	0.00%	58.82%	N/A	N/A	6.67%	33.33%	20.00%
Ethnic Institutions	0.00%	17.65%	N/A	N/A	0.00%	33.33%	16.67%

	103rd St/ Watts	Chinatown	Expo/Vermont	Highland Park	Hollywood/ Western	Mariachi Plaza	Total	
# Blocks	20	17	18	16	15	12	14.33	
Total Blocks	98							
Land Uses								Average
Single Family	40.00%	0.00%	11.67%	48.13%	0.00%	32.08%	26.74%	
Multifamily	28.00%	0.00%	38.33%	41.25%	45.33%	12.08%	32.89%	
Retail	9.00%	37.06%	0.00%	0.94%	15.33%	31.67%	15.98%	
Commercial	1.00%	0.29%	2.22%	0.00%	0.00%	0.00%	0.00%	
Institutional	17.00%	7.06%	25.56%	4.69%	1.33%	12.50%	6.17%	
Industrial	0.00%	4.12%	0.00%	0.00%	0.00%	0.00%	0.00%	
Mixed-Use	0.00%	26.18%	0.00%	0.00%	10.67%	4.17%	4.94%	
Vacant (park)	5.00%	25.29%	0.00%	0.00%	15.33%	7.50%	7.61%	
	0.00%	0.00%	22.22%	5.00%	12.00%	0.00%	5.67%	
Public infrastructure								Average
Bus Stop Shelter	20.00%	5.88%	22.22%	6.25%	6.67%	0.00%	4.31%	
Ped. Street Lights	10.00%	47.06%	33.33%	0.00%	20.00%	83.33%	34.44%	
Residential permit parking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Street Furniture	25.00%	52.94%	22.22%	0.00%	6.67%	16.67%	7.78%	
Bike Infra	30.00%	5.88%	11.11%	0.00%	26.67%	33.33%	20.00%	
Public Trash Cans	15.00%	52.94%	33.33%	0.00%	20.00%	50.00%	23.33%	
Parking Meters	0.00%	41.18%	11.11%	0.00%	40.00%	33.33%	24.44%	
Street Improvements	55.00%	17.65%	33.33%	93.75%	0.00%	33.33%	42.36%	
Visible People								Average
Busy	10.00%	0.00%	0.00%	0.00%	6.67%	16.67%	7.78%	
Moderately busy	20.00%	41.18%	16.67%	0.00%	40.00%	33.33%	24.44%	
Not busy	45.00%	58.82%	83.33%	100.00%	53.33%	50.00%	67.78%	
Ethnicity				Latino				
Physical Disorder								Average
Overall Rating	2.25	2.24	2.11	2.19	2.27	2.50	2.32	
Neighborhood watch	10.00%	0.00%	5.56%	0.00%	0.00%	0.00%	0.00%	
Anti- littering/graffiti	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Anti-loitering/drug use	5.00%	0.00%	0.00%	0.00%	13.33%	0.00%	4.44%	
Anti-trespassing	55.00%	0.00%	5.56%	12.50%	20.00%	50.00%	27.50%	
Other Signage	0.00%	0.00%	5.56%	37.50%	0.00%	0.00%	12.50%	
Other Notes				"Beware of Dog" and "Security Company"				
Ethnic Commercial Presence								Average
Non-english signs	10.00%	82.35%	N/A	N/A	6.67%	50.00%	28.33%	
Ethnic businesses	5.00%	64.71%	N/A	N/A	20.00%	33.33%	26.67%	
Ethnic goods	0.00%	58.82%	N/A	N/A	6.67%	33.33%	20.00%	
Ethnic Institutions	0.00%	17.65%	N/A	N/A	0.00%	33.33%	16.67%	

	103rd St/ Watts	Chinatown	Expo/Vermont	Highland Park	Hollywood/ Western	Mariachi Plaza	Total
# Blocks	20	17	18	16	15	12	14.33
Total Blocks	98						
Land Uses							Average
Single Family	40.00%	0.00%	11.67%	48.13%	0.00%	32.08%	26.74%
Multifamily	28.00%	0.00%	38.33%	41.25%	45.33%	12.08%	32.89%
Retail	9.00%	37.06%	0.00%	0.94%	15.33%	31.67%	15.98%
Commercial	1.00%	0.29%	2.22%	0.00%	0.00%	0.00%	0.00%
Institutional	17.00%	7.06%	25.56%	4.69%	1.33%	12.50%	6.17%
Industrial	0.00%	4.12%	0.00%	0.00%	0.00%	0.00%	0.00%
Mixed-Use	0.00%	26.18%	0.00%	0.00%	10.67%	4.17%	4.94%
Vacant	5.00%	25.29%	0.00%	0.00%	15.33%	7.50%	7.61%
park)	0.00%	0.00%	22.22%	5.00%	12.00%	0.00%	5.67%
Public infrastructure							Average
Bus Stop Shelter	20.00%	5.88%	22.22%	6.25%	6.67%	0.00%	4.31%
Ped. Street Lights	10.00%	47.06%	33.33%	0.00%	20.00%	83.33%	34.44%
Residential permit parking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Street Furniture	25.00%	52.94%	22.22%	0.00%	6.67%	16.67%	7.78%
Bike Infra	30.00%	5.88%	11.11%	0.00%	26.67%	33.33%	20.00%
Public Trash Cans	15.00%	52.94%	33.33%	0.00%	20.00%	50.00%	23.33%
Parking Meters	0.00%	41.18%	11.11%	0.00%	40.00%	33.33%	24.44%
Street Improvements	55.00%	17.65%	33.33%	93.75%	0.00%	33.33%	42.36%
Visible People							Average
Busy	10.00%	0.00%	0.00%	0.00%	6.67%	16.67%	7.78%
Moderately busy	20.00%	41.18%	16.67%	0.00%	40.00%	33.33%	24.44%
Not busy	45.00%	58.82%	83.33%	100.00%	53.33%	50.00%	67.78%
Ethnicity				Latino			
Physical Disorder							Average
Overall Rating	2.25	2.24	2.11	2.19	2.27	2.50	2.32
Neighborhood watch	10.00%	0.00%	5.56%	0.00%	0.00%	0.00%	0.00%
Anti-littering/graffiti	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Anti-loitering/drug use	5.00%	0.00%	0.00%	0.00%	13.33%	0.00%	4.44%
Anti-trespassing	55.00%	0.00%	5.56%	12.50%	20.00%	50.00%	27.50%
Other Signage	0.00%	0.00%	5.56%	37.50%	0.00%	0.00%	12.50%
Other Notes				"Beware of Dog" and "Security Company"			
Ethnic Commercial Presence							Average
Non-english signs	10.00%	82.35%	N/A	N/A	6.67%	50.00%	28.33%
Ethnic businesses	5.00%	64.71%	N/A	N/A	20.00%	33.33%	26.67%
Ethnic goods	0.00%	58.82%	N/A	N/A	6.67%	33.33%	20.00%
Ethnic Institutions	0.00%	17.65%	N/A	N/A	0.00%	33.33%	16.67%

	103rd St/ Watts	Chinatown	Expo/Vermont	Highland Park	Hollywood/ Western	Mariachi Plaza	Total
# Blocks	20	17	18	16	15	12	14.33
Total Blocks	98						
Land Uses							
							Average
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Retail	9.00%	37.06%	0.00%	0.94%	15.33%	31.67%	15.98%
Commercial	1.00%	0.29%	2.22%	0.00%	0.00%	0.00%	0.00%
Institutional	17.00%	7.06%	25.56%	4.69%	1.33%	12.50%	6.17%
Industrial	0.00%	4.12%	0.00%	0.00%	0.00%	0.00%	0.00%
Mixed-Use	0.00%	26.18%	0.00%	0.00%	10.67%	4.17%	4.94%
Vacant	5.00%	25.29%	0.00%	0.00%	15.33%	7.50%	7.61%
park)	0.00%	0.00%	22.22%	5.00%	12.00%	0.00%	5.67%
Public infrastructure							
							Average
Bus Stop Shelter	20.00%	5.88%	22.22%	6.25%	6.67%	0.00%	4.31%
Ped. Street Lights	10.00%	47.06%	33.33%	0.00%	20.00%	83.33%	34.44%
Residential permit parking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Street Furniture	25.00%	52.94%	22.22%	0.00%	6.67%	16.67%	7.78%
Bike Infra	30.00%	5.88%	11.11%	0.00%	26.67%	33.33%	20.00%
Public Trash Cans	15.00%	52.94%	33.33%	0.00%	20.00%	50.00%	23.33%
Parking Meters	0.00%	41.18%	11.11%	0.00%	40.00%	33.33%	24.44%
Street Improvements	55.00%	17.65%	33.33%	93.75%	0.00%	33.33%	42.36%
Visible People							
							Average
Busy	10.00%	0.00%	0.00%	0.00%	6.67%	16.67%	7.78%
Moderately busy	20.00%	41.18%	16.67%	0.00%	40.00%	33.33%	24.44%
Not busy	45.00%	58.82%	83.33%	100.00%	53.33%	50.00%	67.78%
Ethnicity				Latino			
Physical Disorder							
							Average
Overall Rating	2.25	2.24	2.11	2.19	2.27	2.50	2.32
Neighborhood watch	10.00%	0.00%	5.56%	0.00%	0.00%	0.00%	0.00%
Anti-littering/graffitti	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Anti-loitering/drug use	5.00%	0.00%	0.00%	0.00%	13.33%	0.00%	4.44%
Anti-trespassing	55.00%	0.00%	5.56%	12.50%	20.00%	50.00%	27.50%
Other Signage	0.00%	0.00%	5.56%	37.50%	0.00%	0.00%	12.50%
Other Notes				"Beware of Dog" and "Security Company"			
Ethnic Commercial Presence							
							Average
Non-english signs	10.00%	82.35%	N/A	N/A	6.67%	50.00%	28.33%
Ethnic businesses	5.00%	64.71%	N/A	N/A	20.00%	33.33%	26.67%
Ethnic goods	0.00%	58.82%	N/A	N/A	6.67%	33.33%	20.00%
Ethnic Institutions	0.00%	17.65%	N/A	N/A	0.00%	33.33%	16.67%

CHAPTER 5: FOSTERING EQUITABLE TRANSIT ORIENTED DEVELOPMENT IN LOS ANGELES

Introduction

The purpose of this chapter is to 1) investigate how CBOs and public agencies are measuring and combating the negative impacts of gentrification; 2) analyze challenges to leveraging influence on equity in the transit oriented development (TOD) planning process, and 3) identify best practices to advancing equitable development near rail transit. The study looked at six Los Angeles neighborhoods where TOD has taken -- or is currently taking place. In this chapter, we provide an overview of the policies that have spurred TOD in Los Angeles County and the need to evaluate their impact on these communities. We also describe our data collection method, along with brief descriptions of the rail station areas, and the community groups and agencies that were interviewed. The chapter then details our findings and provides recommendations for achieving equitable development based on these findings.

Background

Los Angeles's plans, policies and public expenditures are intended to promote a transit-oriented future. But, while the Los Angeles County Metropolitan Transportation Authority (Metro) is in the midst of spending billions of dollars on expanding public transit, it is unclear how equitably the benefits from these transit investments will be distributed. In 2008, Los Angeles County residents passed ballot Measure R, a half-cent sales tax increase to fund transportation projects and improvements for thirty years. The arguments for this ballot measure focused on reducing congestion, extending the rail

transit network, and reducing dependence on foreign oil (Metro, 2009). This new rail transit infrastructure has triggered an investment boom for development near stations (Reconnecting America, 2013). Also, in 2008, the California legislature passed Senate Bill 375, the Sustainable Communities and Climate Protection Act. This law requires each of California's metropolitan planning organizations to develop a Sustainable Communities Strategy that integrates land use, transportation, and housing planning to achieve regional greenhouse gas emission reduction targets (Sustainable Communities and Climate Protection Act, 2008). Focusing development in high quality transit areas is a central component of Southern California's regional growth strategy (SCAG, 2012).

Metro is building new transit lines, Los Angeles is growing around its stations, and Southern California is implementing its Sustainable Communities Strategy. Nevertheless, low-income residents and communities of color are increasingly concerned about how transit investments and nearby development will affect current residents. If housing costs increase in areas with high housing demand, it will force low-income residents to move to cheaper and less desirable locations with limited access to transit. Community-based organizations (CBOs), like the South East Asian Community Alliance, East Los Angeles Community Corporation, and the Northeast Los Angeles Alliance, fear that long-standing businesses will be displaced by chain stores, upscale retail, or new restaurants that can afford these neighborhoods' rising rents (ELACC, personal communication, February 7, 2015; SEACA, personal communication, February 4, 2015; NELA Alliance, personal communication, March 30, 2015).

The three objectives of our study are to (1) analyze how CBOs and public agencies are measuring and combating the negative impacts of gentrification, (2) analyze challenges to leveraging influence on decision-makers to ensure equity in the TOD planning process, and (3) identify best practices to advancing equitable development near rail transit. We conducted interviews with staff members from twelve CBOs engaged in equitable development advocacy and organizing within six selected transit station areas, as well as staff members with five citywide or regional CBOs engaged in community organizing outside of our case study areas. In addition, we interviewed nine planners and public agency staff members and four representatives from the offices of local elected officials involved in the design, advising, and implementation of transit infrastructure and the subsequent development of the surrounding transit areas.

Through interviews, we heard a broad range of perspectives on the accomplishments as well as the challenges experienced by CBOs in influencing TOD policies, or mitigating the negative externalities of development. Moreover, we gained insights into how public sector actors such as Metro and the City of Los Angeles are addressing equitable development. We identified key policy approaches to addressing residential and commercial displacement, and analyzed these methods.

Community groups and advocacy organizations have asserted that neighborhood residents near TOD are often excluded from the planning, design and decision-making processes. On one hand, the central concern of these organizations is that exclusion from the planning processes will ultimately lead to the displacement of residents and business owners due to evictions or increases in rent, the transformation of neighborhood

characteristics, and unresolved conflicts over community spaces (Cowing et al., 2012). These issues have particularly affected low-income families in these communities, pushing them out to edge cities and further away from job centers, causing many to travel long distances to work (Lopez, 2015). On the other hand, development and revitalization efforts in TOD neighborhoods can also bring about positive outcomes including home value appreciation, growth of local jobs, reduced crime, and the beautification of streetscapes.

While local public agencies aim to encourage non-automobile transportation through transit infrastructure and spur economic development through TOD, it may not always be equitable. “Equitable TOD” refers to the creation of “more sustainable and socially inclusive development that will benefit the existing local neighborhood, and also the city at large by ensuring a more stable real estate market, the preservation of valuable cultural assets, and the inclusion of affordable housing” (Mueller, 2013, p. 28). Examples of equitable TOD have been documented in several studies (Mueller, 2013; Pollack et al., 2010; Soursourian, 2010; Zuk, 2015). The literature on equity in real estate development examines the elements required for achieving equity. This may include grassroots efforts led by community-based organizations to educate community members and organize their participation in the decision-making process. Further, the literature argues that equitable development requires the strong leadership and political will of elected officials to guarantee that investments in transit infrastructure and new developments do not destabilize communities and displace its residents (Zuk, 2015). Overall, a coordinated and inclusive planning approach is imperative to equitable TOD.

Several U.S. cities have successfully implemented an inclusive planning approach that includes elements of equitable development near transit neighborhoods, including projects in Portland, Oakland, Denver, and Minneapolis (Zuk, 2015; Soursourian, 2010). Through various strategies, including community organizing by local organizations, or via a community benefits agreement (CBA)⁹, transit-rich communities have integrated affordable housing, commercial retail, and social services with public transportation (Soursourian, 2010). In addition, CBAs have also provided communities with additional benefits such as job opportunities in which local residents get hiring priority, preference for local businesses to occupy the majority of commercial space, and access to space for public art (Soursourian, 2010).

This chapter will explore best practices for inclusive planning and equitable transit-oriented development in Los Angeles County.

Methodology

This project seeks to understand CBO and public agency strategies to mitigate potential negative externalities of TOD in the City of Los Angeles. Our team focused on strategies to mitigate the displacement of long-time residents and the shuttering of local businesses due to rising rents. We also explored which strategies are effective and why.

The research team utilized a semi-structured interview instrument to guide a series of interviews with representatives of various CBOs and public agencies.

⁹ “A Community Benefits Agreement (CBA) is a private, legally binding contract between a developer and a community coalition that codifies the commitments the developer has made regarding how the project will benefit the surrounding community. CBAs typically contain provisions related to affordable housing, living wages, local hiring, environmental justice, and resources for community services, although the specific nature of the CBA provisions are determined by the local community.” (Soursourian, 2010; p. 26)

Organizations and agencies were selected based on their proximity to a study area or their previous experience with other aspects of TOD in Los Angeles. This chapter discusses the methodology that guided the development of our interview protocol, the strategy for selecting interviewees, and the guidelines for conducting the interviews themselves.

We identified and contacted planners, elected officials, and CBO staff through internet searches and professional networks. The team identified approximately fifty potential participants from twenty CBOs and five public agencies. We contacted these prospective interviewees by email or telephone. Seventeen CBO representatives agreed to participate in an interview. Of the five public agencies contacted, staff from all agreed to an interview. Thirteen representatives of public agencies were interviewed. We conducted interviews from January through April 2015.

The following section outlines the key questions used for this study, an outline to the interview approach, and information about the interviewed organizations and agencies. After analyzing interview responses, our team identified best practices in TOD collaboration and the ways in which CBOs and government agencies can better influence the benefits of TOD while minimizing negative externalities.

Key Interview Questions

How has Transit Oriented Development (TOD) impacted the study areas?

We asked questions about how TOD had impacted the study areas in question. Before proceeding to other interview questions, it was important to understand what changes due to TOD that the interviewees identified. This line of question provides an opportunity to better understand community experience through the eyes of those who

live and work in the area. Assessing the perceived impacts on each study area enabled the team to compare the effects of TOD across geographic areas.

How effective have local communities been in controlling the outcomes of TOD?

The next set of questions pertains to how CBOs and agencies have influenced the outcomes of TOD in a geographic area. Our interview team was looking for both concrete examples of successful and unsuccessful campaigns or strategies to influence the results of TOD, as well as general issues that had arisen in specific areas that were experiencing TOD growth. In the end, the responses to this line of questioning form the basis for a set of recommendations to address ongoing concerns in the TOD process.

What is the relationship between CBOs and governmental agencies in the TOD process?

A key focus of study for the project is the amount of community input in the development of Metro's rail system. Ideally, there would be a high level of collaboration and coordination between the governmental agencies overseeing the construction of transit lines (and the subsequent urban growth patterns) and the local communities that experience these impacts. The research team was interested in understanding the degree of coordination (if any) between government agencies charged with the development of transit and the communities that they are ostensibly there to serve.

What more can be done to allow station area residents and community groups to influence the TOD process from conception, design, and realization?

Finally, our team was interested in what were the internal and external factors, such as staff availability or professional relationships that limited the effectiveness of CBOs and governmental agencies in impacting the TOD process. Governmental agencies are primarily responsible for the design and implementation of a transit system; CBOs

can work through the public process or informal channels to minimize undesirable outcomes in the development. Given this relationship, we were interested in understanding the interruptions, obstacles, and issues that prevent a community from having a more direct role in the entire TOD process.

Selected Areas

All of the selected areas for study are located within the City of Los Angeles. The neighborhoods all have at least one Metro rail station. Some stations have been in operation since the opening of the Metro system over twenty years ago in 1990. Others have been in operation for less than three years. The six study areas were selected to provide a mix of neighborhoods, located along different Metro light rail lines.

Chinatown (Gold Line)

Year Opened: 2003

The Chinatown station is an elevated stop on Metro's Gold Line. It is located on the corner of North Spring Street and College Street on the eastern edge of LA's historic Chinatown district. The station itself is located about three miles from LA's downtown core and only one stop away from Union Station.

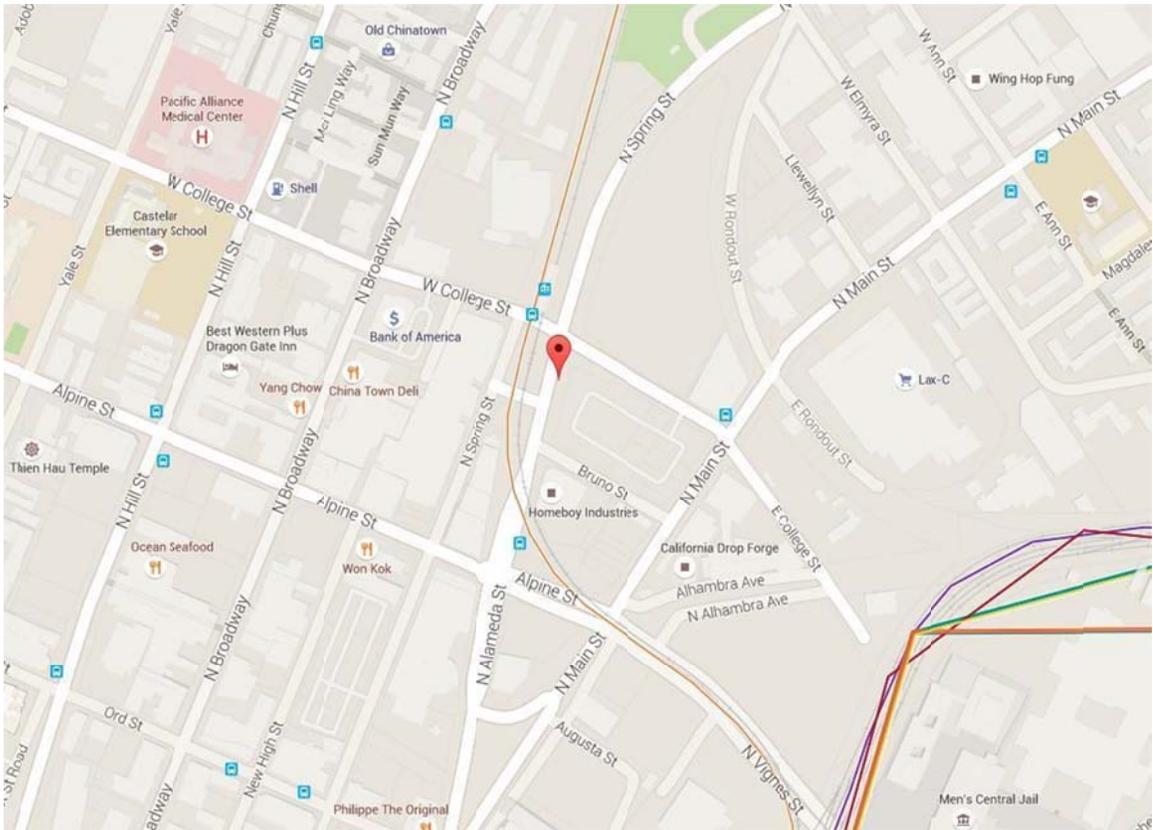


Figure 5.1 Map of Chinatown Gold Line Station (Google Maps, 2015).

Highland Park (Gold Line)

Year Opened: 2003

The Highland Park station is an at-grade stop on Metro's Gold Line. The station is located near the intersection of North Avenue 57 and Marmion Way on the Southeastern edge of the Highland Park neighborhood. The station is five stops from Union Station and six miles from Downtown Los Angeles.

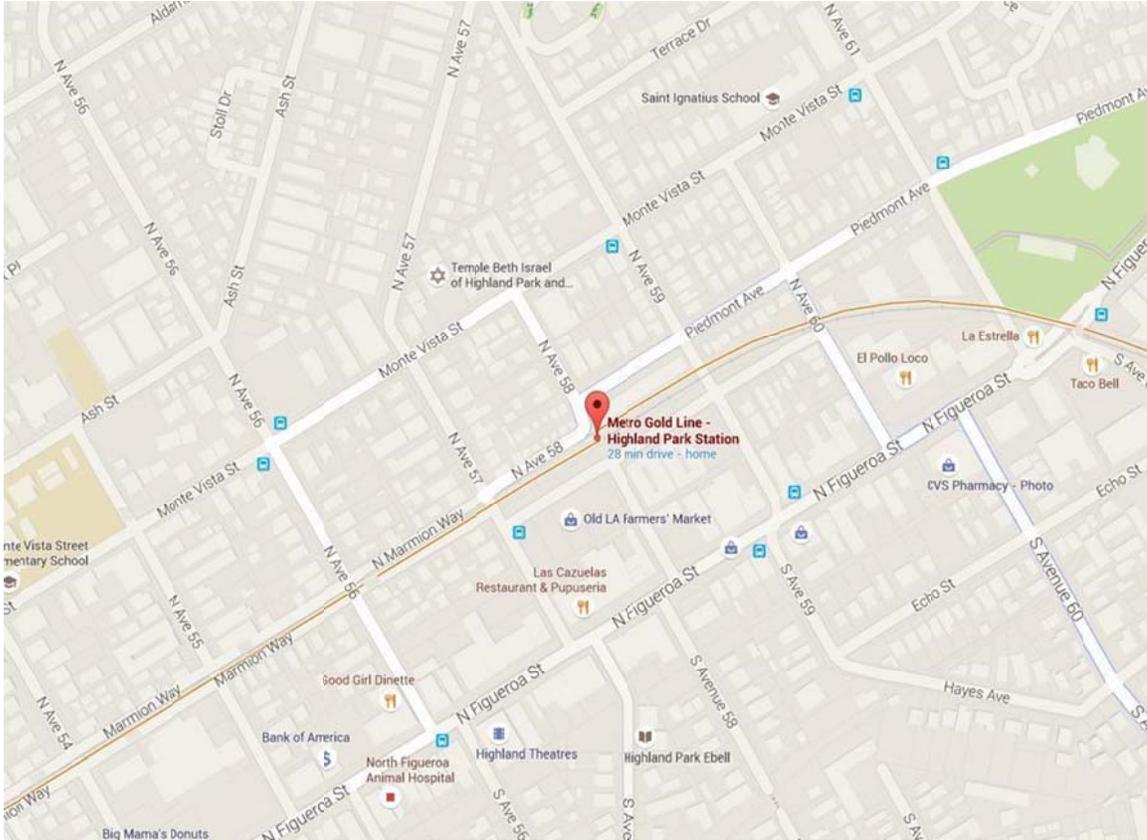


Figure 5.2 Map of Highland Park Gold Line Station (Google Maps 2015).

Mariachi Plaza (Gold Line)

Year Opened: 2009

The Mariachi Plaza station is a below grade, subterranean stop on Metro’s Gold Line. The station is located near the intersection of 1st Street and Boyle Avenue in the Boyle Heights District. The station stop exits directly on to Mariachi Plaza, a historic public space and important community asset.

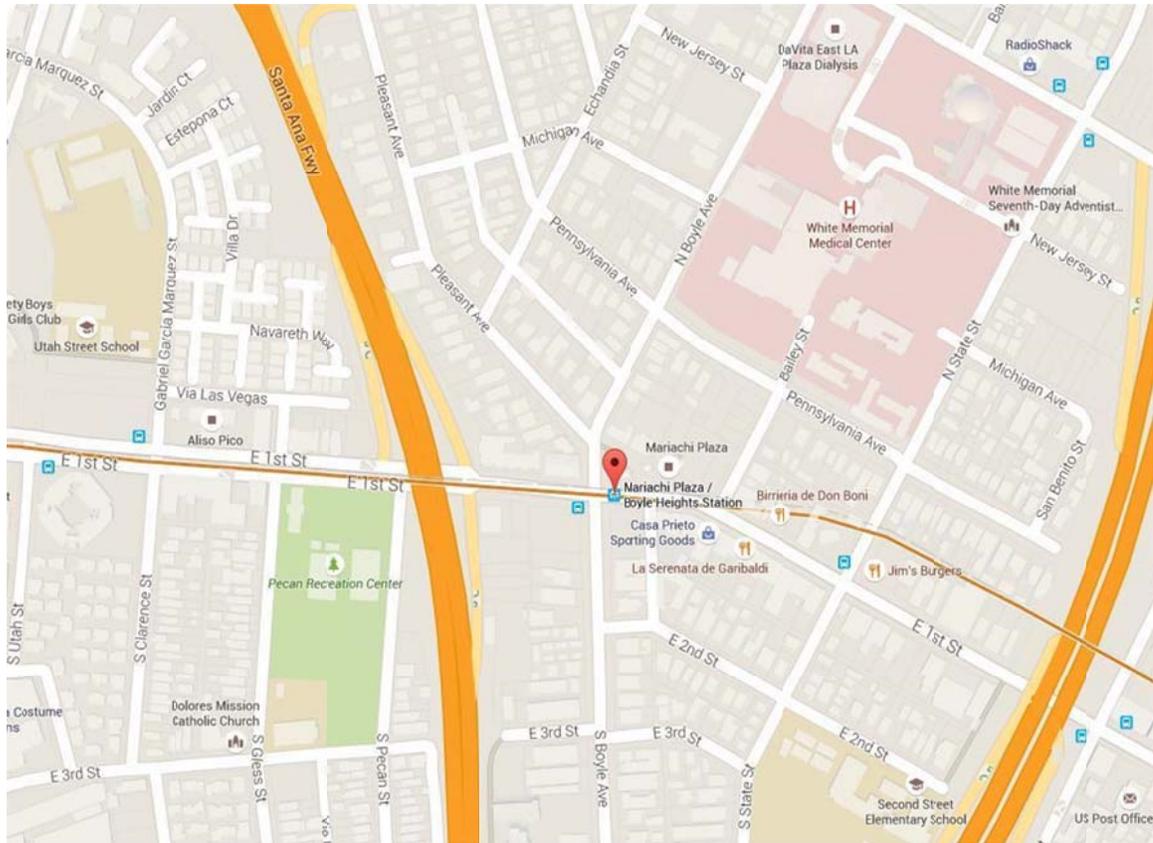


Figure 5.3 Map of Mariachi Plaza Gold Line Station (Google Maps 2015).

Expo/Vermont (Expo Line)

Year Open: 2012

The Expo/Vermont station is an at-grade stop on Metro’s Expo Line. The station is located near the intersection of Exposition Boulevard and Vermont, immediately adjacent to the campus of the University of Southern California and nearby Exposition Park to the East. The station stop is located in the middle of the University Park neighborhood, east of the West Adams district and is the Expo Line stop in the South LA area. Among the study areas, this is the newest station in operation and was opened in 2012.

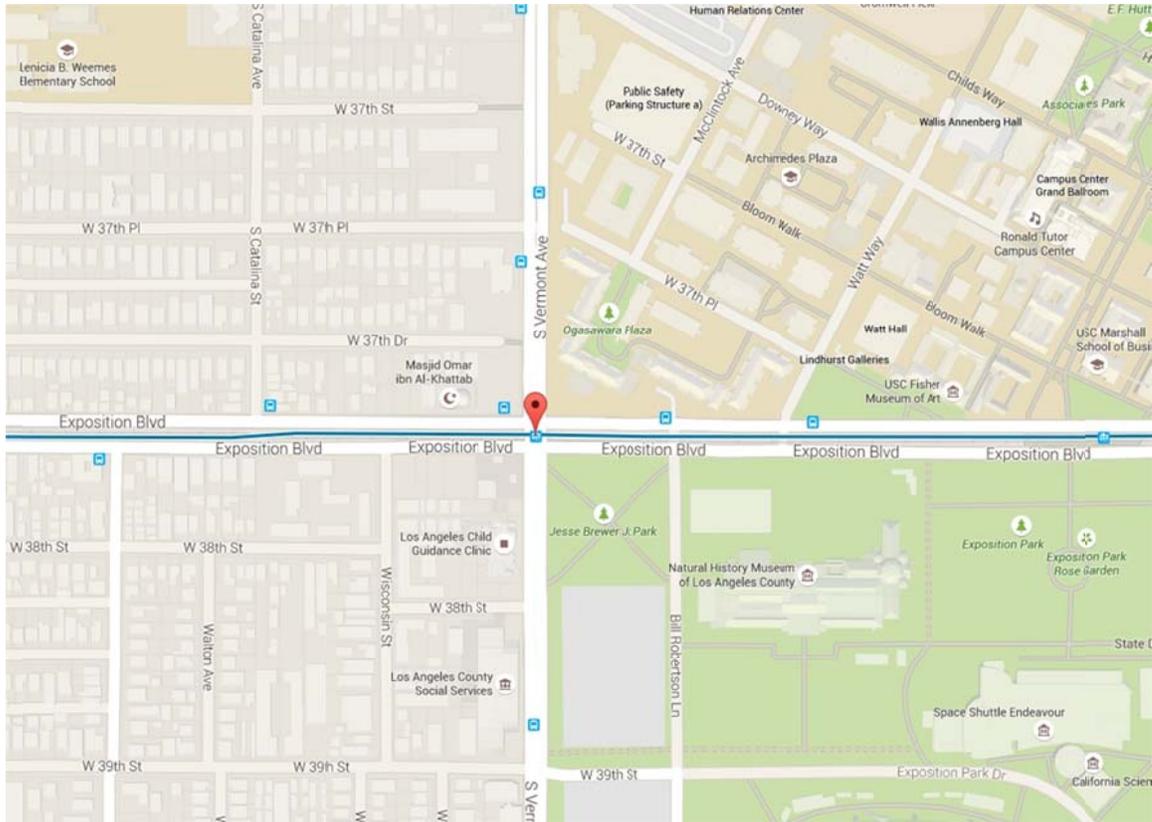


Figure 5.4 Map of Expo /Vermont Expo Line Station (Google Maps 2015).

103rd Street/Watts Tower (Blue Line)

Year Opened: 1990

The 103rd Street/Watts Tower station is an at-grade stop on Metro’s Blue Line. The station is located near the intersection of Grandee Avenue and 103rd Street. The station is located in the heart of the Watts Neighborhood and is immediately adjacent to the historic Watts Tower Art Center. Of the station study areas, this stop has been in operation the longest.

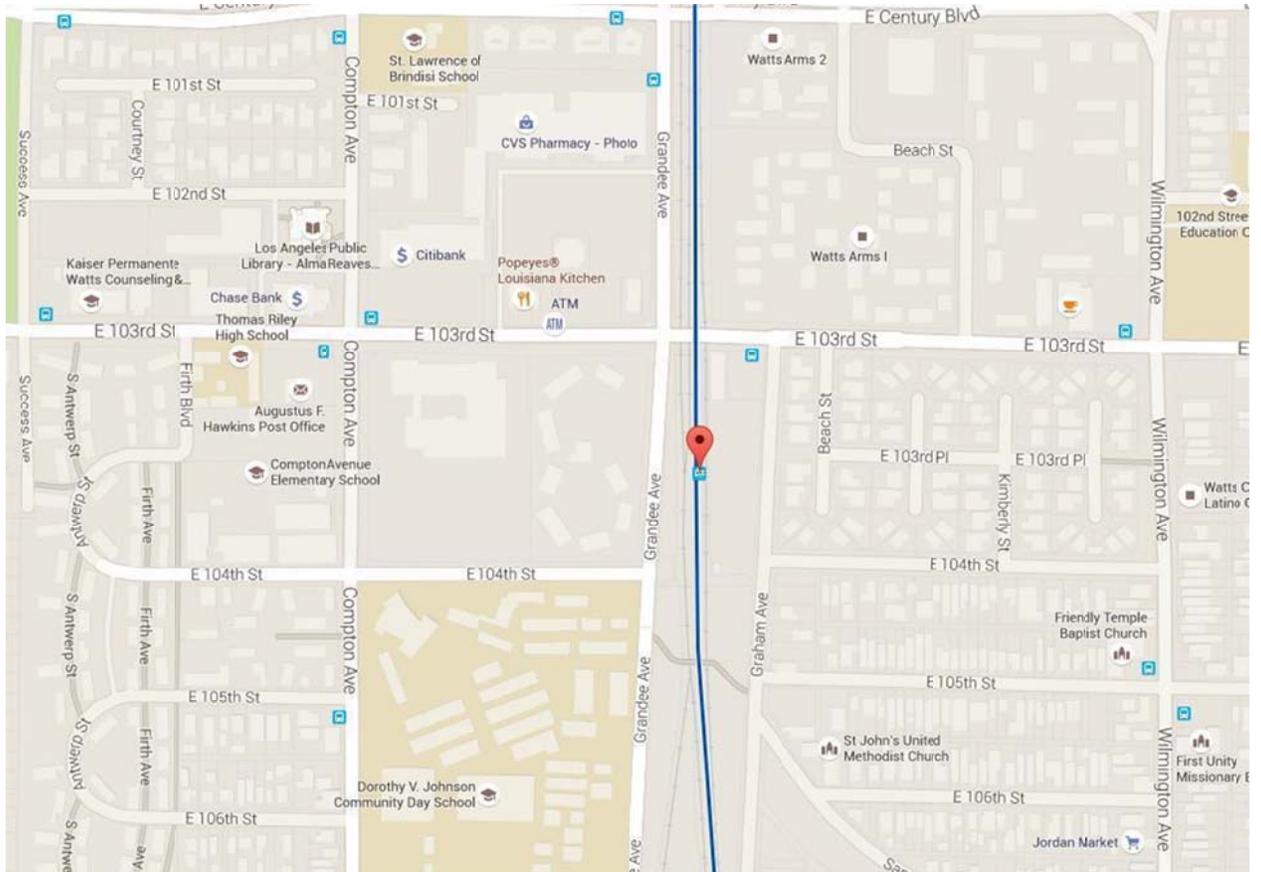


Figure 5.5 Map of 103rd Street/Watts Tower Blue Line Station (Google Maps 2015).

Hollywood & Western (Red Line)

Year Opened: 1999

The Hollywood & Western Red Line station is a below grade, subterranean stop on Metro’s Red Line. As indicated by the name, the station is located at the intersection of Hollywood Boulevard and Western Avenue. The station serves the East Hollywood area and is adjacent to the Thai Town and Little Armenia neighborhoods.

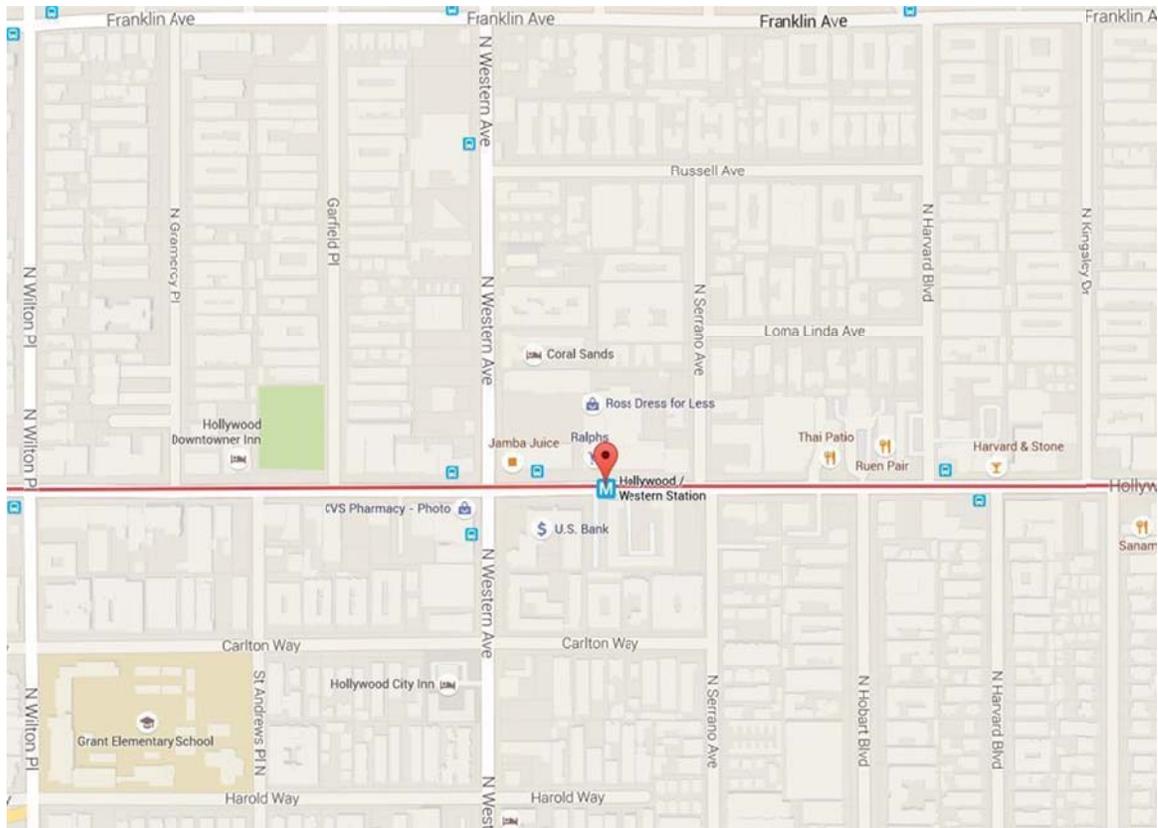


Figure 5.6 Map of Hollywood & Western Red Line Station (Google Maps 2015).

Interview Conduct Protocol

Our team developed a semi-structured interview guide, which gave us the flexibility to discuss unanticipated insights with participants if they arose. Interviews generally lasted between 30 and 45 minutes. Whenever possible, we conducted the interviews in-person. We conducted twenty-two interviews in-person and eight interviews over the phone. All interviewees consented to have the interviews digitally recorded.

Once all interviews were completed, the team indexed the interviews. Interviews were transcribed based on general themes and observations that came up during the conversation. Rather than transcribing interviews verbatim, the team instead focused on

key issues and concerns that came up during multiple interviews. Specific quotes were transcribed if they clearly identified and elucidated key findings or observations. Once interview responses were reviewed and transcribed, they were coded by themes, such as “resident displacement” or “rising rents.” These themes were identified and organized based on commonalities seen throughout the interview process. Coding from each interview question was then combined with other responses from other interviews to see if there are themes across different participants.

Targeted Organizations

The research team targeted two groups of organizations for interviews: CBOs and public agencies. These targeted organizations were selected based on their location within a study area, experience with TOD or both. Potential interviewees were located via internet searches, referrals from colleagues and recommendations from other interviewees (snowball sampling). We begin by contacting and scheduling interviews with targeted organizations in late January 2015.

Community Based Organizations

For the purposes of this study, we utilized the federal government’s definition of a community-based organization:

... a public or private nonprofit organization of demonstrated effectiveness that-
(A) is representative of a community or significant segments of a community; and
(B) provides educational or related services to individuals in the community”
(Community Based Organization, 20 USCS § 7801(6)).

The research team limited the CBO universe to organizations that work in the City of Los Angeles and have had a long-term presence (greater than five years) in the communities in which they work. Identification of these CBOs was done through

judgment sampling wherein individuals were selected based on this research (Harell & Bradley, 2009, p. 32). This yielded a study sample of seventeen CBOs.

Our intended interviewee for each CBO was the executive director or a CBO employee with specific experience or insight in the TOD process. The interviewees had to have worked for the CBO for a significant length of time or participated in multiple organizing campaigns. Table 5.1 includes more information about the organizations that were interviewed.

Organization	Area Served	Year Est.	Approx. Annual Expenditures
Esperanza Community Housing	South Los Angeles	1989	\$2.5 Million (2015)
T.R.U.S.T South LA	South Los Angeles	2005	\$525,000 (2013)
Strategic Action for a Just Economy (SAJE)	South Los Angeles	1996	\$900,000 (2013)
Southeast Asian Community Alliance (SEACA)	Chinatown/Lincoln Heights	2002	N/A
Los Angeles Alliance for a New Economy (LAANE)	Greater Los Angeles Area	1993	\$4.5 Million (2013)
Unión de Vecinos	Boyle Heights / East Los Angeles	1996	\$360,000 (2009)
East Los Angeles Community Corporation (ELACC)	East Los Angeles	1995	\$3.5 Million (2014)
Abode Communities	Greater Los Angeles Area	1968	\$7.3 Million (2013)
Chinatown Community for Equitable Development (CCED)	Chinatown	2012	N/A

Thai Community Development Center	Thai Town / East Hollywood	1994	\$635,000 (2012)
Koreatown Immigrant Workers Alliance (KIWA)	Koreatown	1992	\$790,000 (2014)
Little Tokyo Service Center (LTSC)	Little Tokyo/ Greater Los Angeles Area	1979	\$296,000 (2013)
Watts Community Studio	Watts / South Los Angeles	2011	N/A
Public Counsel	Greater Los Angeles Area	1970	\$10.1 Million (2013)
Trust for Public Land	Greater Los Angeles Area/ National	1972	\$141 Million (2013)
Northeast Los Angeles Alliance (NELA Alliance)	Highland Park	N/A	N/A
LA Voice	Greater Los Angeles Area	2000	N/A

Table 5.1 Table of CBOs and relevant characteristics. Approximate annual expenditure amounts from guidestar.com

Strategic Actions for a Just Economy (SAJE)

SAJE is a community organizing and advocacy organization working on behalf of the current residents of South LA, particularly in the Figueroa Corridor. SAJE provides legal support to distressed renters, helps establish land trusts, and works to find positive solutions to conflicts between institutions and low-income city residents. SAJE works in partnership with other organizations to ensure that the fate of city neighborhoods is decided by those who live there, and accomplishes this in ways that are replicable and sustainable (Strategic Actions For a Just Economy 2015).

Trust South LA

Trust South LA was established in 2005 as a permanent and democratic steward of land in South Los Angeles. Since its inception, the group has expanded its community membership, has raised and dedicated millions in funds in its effort to improve the way of life for thousands of local residents, businesses, and stakeholders (Trust South LA 2015).

Los Angeles Alliance for a New Economy (LAANE)

Founded in 1993, LAANE is recognized as a national leader in the effort to address the challenges of working poverty, inadequate health care, and polluted communities. Combining a vision of social justice with a practical approach to social change, LAANE has helped set in motion a broad movement to transform conditions in Los Angeles and beyond (LAANE: A New Economy for All 2015).

Unión De Vecinos (UDV)

UDV is a community advocacy organization that serves residents of Boyle Heights and East Los Angeles. The organization fights for the rights of their constituents to live in and control development within their neighborhoods. UDV has participated in many of the development discussions around Metro owned parcels near Mariachi Plaza (Union De Vecinos 2015).

South East Asian Community Alliance (SEACA)

Launched in 2002, SEACA was founded on the principle of inclusion, and from the beginning, has been guided by a belief that individuals can improve and build power in their own communities. The organization was started due to a lack of resources targeting the needs of Southeast Asians. SEACA began as a youth leadership program and over the years have expanded programs to include youth organizing, creative arts and

self-expression, and most recently, health and community building through food and gardening (SEACA 2015).

Abode Communities

Abode Communities mission is to open new doors in people's lives through creative and responsible design, development, and operation of service-enhanced affordable housing. Abode Communities was founded in 1968 and was originally called the Los Angeles Community Design Center. Abode Communities' primary work involves building sustainable, multi-family affordable housing to address the needs of Southern California's large workforce, low-income families, seniors, and individuals with special needs. Currently, the organization owns 34 properties throughout the LA region, serving over 6200 residents (Abode Communities 2015).

East Los Angeles Community Corporation (ELACC)

ELACC is an organization that works with community members to orient their real estate development activities to meet community needs. ELACC has successfully organized campaigns to retain local businesses in the face of displacement pressures. The coalition is currently advocating the increased development of affordable housing in the Mariachi Plaza area (ELACC 2015).

Thai Community Development Center (Thai CDC)

Thai CDC was established to begin addressing the health and human service needs of the Thai population living in Los Angeles. Thai CDC offers a broad range of services, including health and human services, legal services, senior services, and youth services. Since its establishment in 1994, Thai CDC has addressed the multifaceted needs

of Thai immigrants in the Southern California region, who, at an estimated population of 100,000 are considered the largest number of Thais living abroad (Thai CDC, 2015).

Esperanza Community Housing

Esperanza Community Housing Corporation works to achieve comprehensive and long-term community development in the Figueroa Corridor neighborhood of South-Central Los Angeles. Esperanza seeks to create opportunities for South LA residents' growth, security, participation, recognition, and ownership through developing and preserving affordable housing, promoting accessible health care, stimulating involvement in arts and culture, ensuring quality education, pursuing economic development, and advocating for progressive public policy. Through partnerships with churches, schools, block clubs, and other community institutions, Esperanza helps to strengthen the social infrastructure of the neighborhood (Esperanza Community Housing 2015).

Watts Community Studio

The Watts Community Studio is a research project supported by the City of Los Angeles' Council District 15 Office of Joe Buscaino. The project goal is to inform local planning and economic development policy by surveying the business owners and residents of Watts in order to find out what problems most concern the community and determine how the Council District can support positive change. In addition to surveys, WCS also aims to increase collaboration and organization between small businesses, community-based organizations and faith-based organizations by conducting focus groups (WCS 2015).

Chinatown Community for Equitable Development (CCED)

Chinatown Community for Equitable Development (CCED) is a multiethnic coalition that was founded in May 2012 (Nguyen 2014). CCED was founded to advocate for Chinatown's small businesses whose tenure and survival was threatened by the development of the Chinatown Walmart. The organization's larger goals include preserving the cultural integrity and character of the neighborhood and advocating for the rights of long term residents to live and work in the area. While Chinatown has changed due to light rail expansion and the increased development interest it prompted, residents can be assured that CCED will provide them a voice in the development process.

Koreatown Immigrant Workers Alliance (KIWA)

The Korean Immigrant Worker Alliance (KIWA) advocates of the rights of Koreatown's low-wage immigrant workers to advance a vision of a more economically and socially just Los Angeles (KIWA: Workers For Justice 2015). While KIWA's primary focus is worker rights, the alliance also focuses on housing rights under a larger equitable development platform. The alliance's multifaceted approach to employment and development advocacy is crucial given the broad impact TOD has on the employment and housing opportunities for neighborhood residents.

Little Tokyo Service Center (LTSC)

Little Tokyo Service Center was founded in 1979 and has continues to serve the diverse residents of Downtown Los Angeles and the city as a whole (Little Tokyo Service Center). This community development organization provides social service programs for residents of Little Tokyo and collaborates with other community based organizations to develop community serving affordable housing. The organization has been active in the

planning and development of Metro's regional connector which passes through Little Tokyo. LTSC has worked to ensure that any development related to this transit investment will benefit neighborhood residents and acknowledge the history and culture of the neighborhood.

Public Counsel

Public Counsel is a public interest law firm that provides pro bono legal services to aid disempowered individuals and organizations (Public Counsel). In particular, Public Counsel's Community Development Project aims to encourage diverse and economically stable communities by providing pro bono legal services to community organizations and small businesses who cannot afford legal representation. The organization also supports the development and preservation of affordable housing through policy research and litigation. Public Counsel has engaged in policy research that explores how federal transit law can be leveraged to encourage affordable housing near transit services.

Trust for Public Land

Trust for Public Land works to create greenspace in cities across the nation. The organization's Los Angeles office recently worked with the City and Watts community residents to transform an abandoned lot near the Metro Blue Line into community serving park space (Trust for Public Land, personal communication April 6, 2015). Development interest spurred by TOD can provide increased community amenities like greenspace in urban neighborhoods. The Trust for Public Land's efforts show that community driven advocacy can create these improvements in underinvested neighborhoods that need them most.

Northeast Los Angeles Alliance (NELA Alliance)

The Northeast Los Angeles Alliance (NELA Alliance) was recently formed by residents of northeast Los Angeles neighborhoods like Highland Park. This grassroots organization was formed to increase the awareness of gentrification in these neighborhoods that can be linked to a host of factors like transit development. The organization has conducted workshops to facilitate dialogue on gentrification of northeast Los Angeles neighborhoods and increase education about tenant rights (NELA Alliance, personal communication, March 30, 2015). This growing organization is helping to facilitate needed dialogue in neighborhoods that are changing.

LA Voice

LA Voice was founded in the year 2000 and organizes to increase leadership capacity in Los Angeles working class communities (LA Voice). The organization is involved in a number of issues including housing and workers rights in rapidly changing Los Angeles neighborhoods (LA Voice, personal communication, April 10, 2015). The organization has also conducted community visioning exercises around Metro owned properties near the Metro Red Line. The organization's advocacy work has amplified the voices of low income residents so development and neighborhood improvements benefit all residents.

Public Agencies

Public agencies were the second group of organizations selected for this research study. For the purposes of our study, we limited the selection to public agencies that are involved in local or regional land use and transportation planning in Los Angeles. Additionally, the public agencies must have worked on projects related to TOD, from

development planning to construction of the actual transit infrastructure. We excluded the Los Angeles Department of Transportation (LADOT) because our secondary research found that it has not been active in TOD, despite providing other transit services for much of the study area. Table 5.2 identifies the five public agencies that were identified for interviews. Since these agencies are large organizations that have various missions across the LA region, we selected interviewees from multiple departments to collect insight from different perspectives. Twenty-two representatives of public agencies were identified as potential interview subjects.

Agency	Division Interviewed	No. of Interviewees	Area Served
Los Angeles County Metropolitan Transit Authority (LA Metro)	Joint Development Program	1	County of Los Angeles
City of Los Angeles	Department of planning	5	City of Los Angeles
City of Los Angeles	City Council (Districts 1, 13, 14)	3	City of Los Angeles
City of Los Angeles	Neighborhood Council (Councils)	3	City of Los Angeles
County of Los Angeles	Board of Supervisors (District 1)	1	City of Los Angeles

Table 5.2 Table of Public Agencies

Los Angeles County Metropolitan Transportation Authority (Metro)

Metro is County-level agency which provides mass transit services to LA County. Only a small number of Metro departments are involved with TOD. Based on preliminary research, we selected the Real Estate Management, Joint Development Program, and Countywide Planning and Development Departments for our Metro interview universe. A total of one interview was conducted within the Metro Office.

City of Los Angeles, Department of Planning

The City of Los Angeles' Department of Planning is heavily involved with planning for TOD around Metro stations. We targeted staff working on Transit Neighborhood Plans. We also identified planners involved in developments or TOD plans in the study regions. A total of five interviews were conducted within the Department of Planning Office.

County of Los Angeles, Board of Supervisors

The County of Los Angeles is subdivided into five districts that are governed by five representatives that comprise the County Board of Supervisors. These representatives are residents of their respective districts and are elected by members of their supervisory districts. The heads of each supervisor district sit on the board of directors of Metro and can garner needed support from their constituents to guide development in their districts. We reached out to staff members or elected officials of Supervisor Districts with Metro rail stations in them. Researchers conducted one interview with a staff member from Supervisor District 1.

City of Los Angeles, City Council

The Los Angeles City Council is composed of fifteen members from districts throughout the City. These elected representatives serve four year terms and can influence the scope and scale of TOD practices in their own districts through planning recommendations and community organizing. We reached out to a staff member or elected official of every council district that has one of the selected Metro stations within its borders. A total of three interviews were conducted with representatives of a Council District.

City of Los Angeles, Neighborhood Councils

Neighborhood Councils are the most local form of government in the City of Los Angeles. While purely advisory in nature, these Councils can still have a huge influence on the direction of community issues such as growth and development. There are a total of ninety-five, city-certified councils that are recognized and overseen by the Department of Neighborhood Empowerment. These councils lead community meetings and provide residents with an opportunity to provide input on issues affecting the area. We targeted Neighborhood Councils that serve the areas selected for study. A total of three interviews were conducted with representatives of a Neighborhood Council.

ANALYSIS

Researchers interviewed representatives from CBOs and public agencies in order to better understand what CBOs and public agencies are doing to mitigate the negative impacts of TOD. During the research team's investigation of these issues, key findings emerged:

- With incoming transit stations, new residential and retail developments are emerging. These new developments aim to serve different populations than what previously existed.
- CBOs actively pursue equitable TOD, but are often limited by capacity to influence planning and development process.
- Public agencies utilize land use planning to encourage TOD equity but these plans could be reevaluated and improved.

These findings and what interviewees mentioned during the interviews are further discussed in the following section.

Neighborhood Changes and TOD

There were some neighborhood changes in five out of the six station areas studied. While there were noticeable changes in the Mariachi Plaza, Chinatown, Highland Park, Expo/Vermont, and Hollywood/Western station areas, there were no noticeable changes near the 103rd Street/ Watts Tower station. Interviewees observed three types of neighborhood changes after a Metro rail station opened. The changes observed were: 1) increased real estate development activity (new construction and renovations) that does not cater to the needs of existing residents; 2) rising rents; and 3) changes in neighborhood services.

Interviewees observed an increase in real estate activity around five of the stations. These activities include the buying and selling of land and development of market rate buildings. This increase in real estate activities occurs because of the access stations provide to Downtown LA. For example, in Highland Park, there is a new project called Transit Village. This project consists of three separate sites, which will be made up of 20 market-rate condominiums, 49 affordable apartments serving households at or below 70% of Area Median Income (AMI), and one manager's unit (Los Angeles Planning Department, 2013). As such, community members are concerned that the building's affordable units are not affordable to current populations (NELA Alliance, personal communication, March 30, 2015). NELA Alliance believes building affordable housing that does not reflect the true needs of the community does not prevent the displacement of long-term renters.

CBOs also observed significant real estate activity around station areas. According to the Chinatown Community for Equitable Development (CCED), real estate

investors that worked in Highland Park are now buying buildings and vacant lots in Chinatown (personal communication, April 15, 2015). CBOs worry that real estate speculation will lead to development that may force long-term, low-income renters out of their neighborhood. According to CCED, about 90% of Chinatown residents are renters (personal communication, April 15, 2015). Some affordable housing units are threatened; Chinatown has had affordable senior housing since the 1980s and onward, but many of the affordable units have expired or are set to expire after their required affordability period (Chinatown Community for Equitable Development, personal communication, April 15, 2015). As a result, neighborhoods are experiencing affordable senior units converting into market rate units. This conversion is often initiated by landlords who turn over the building and ask for higher rents when these affordability requirements expire. CCED and SEACA are concerned with how the conversion of affordable units into market rate units may displace Chinatown's long-term residents. They feel that real estate developers see an opportunity to attract higher returns on their developments, which may have negative effects for communities with many low income families like Highland Park and Chinatown.

As the station areas become more desirable to live in, existing, long-term residents are at higher risk of eviction and displacement. South Los Angeles CBOs like SAJE have discussed many instances of illegal evictions and slum conditions in South Los Angeles (personal communication, April 16, 2015). For example, evictions at the Expo/Vermont station may result from landlords wanting to renovate buildings to increase rental rates to their full market value. Near USC, rents have risen from increasing land values around the Expo line stations and high demand for student housing

(SAJE, personal communication, April 16, 2015). In Hollywood, similar stories of displacement from rising rents have been noted by neighborhood CBOs. An LA Voice organizer estimated that 30 percent of the Hollywood church congregation the organization serves moved to the San Fernando Valley because of rising rents in Hollywood (LA Voice, personal communication, April 10, 2015). Not only are neighborhoods experiencing an increasing supply of market rate rental developments, but they are also losing low-cost and subsidized units to redevelopment.

In addition to a shrinking supply of affordable housing for long-term residents, neighborhoods are also seeing a reduction in Metro bus service. For example, organizers from Union De Vecinos and ELACC noted how well-utilized bus lines in Boyle Heights were discontinued once the Gold Line was completed to avoid overlapping service (personal communication, February 7 & 14, 2015). Metro eliminated the bus line that would have run along the Gold Line because it appeared to be redundant (ELACC, personal communication, February 14, 2015). However, these bus lines provided residents frequent access to neighborhood amenities (e.g. markets, retail, etc.) and allowed riders to travel farther into unincorporated East Los Angeles (East Los Angeles Community Corporation, personal communication, February 7, 2015). A UDV organizer stated that they have heard stories of people taking half an hour to forty five minutes longer to get places (Union de Vecinos, personal communication, February 14, 2015). East Los Angeles CBOs described that the Gold Line is not able to get residents as close to their desired locations, like grocery stores or further east into unincorporated East Los Angeles, as the bus because the rail has fewer stops that are farther apart.

Lastly, CBOs expressed concerns that a growing number of new neighborhood businesses are not catering to the needs of long-term residents. Such needs include: age and culturally appropriate retail that meets the needs of the elderly, affordable food and retail, and in some cases, jobs. CBOs notice that development and incoming retailers like Starbucks and Walmart are catering to new residents or more affluent commuters and not providing goods that have been provided to long-term Chinatown residents (SEACA, personal communication, February 4, 2015). When developments cater to the market to meet the needs of new, target populations (e.g. people with disposable income), neglected groups are forced to shop elsewhere. In Boyle Heights an interviewee mentioned how Mariachi Plaza and its weekly market was increasingly being marketed as cultural tourism after the Gold Line arrived. The interviewee felt the plaza no longer served the community but was increasingly portrayed as a tourist place, as if non-residents, who shopped, visited, or lived there, would instantly become more cultured (Union de Vecinos, personal communication, February 14, 2015). Business turnover and displacement has also led to long-term residents leaving their homes because they no longer feel a cultural and economic connection to Chinatown (SEACA, personal communication, February 4, 2015). A survey was implemented in Chinatown that found that residents often shop and work for the businesses in the area (SEACA, personal communication, February 4, 2015). With the increase in new development, the businesses that provide goods, services, and even jobs are getting displaced (SEACA, personal communication, February 4, 2015). Not only are residents getting displaced by increasing rents, but also by the lack of services meeting their needs.

Relationship between CBOs and Public Agencies

Relationships between CBOs and public agencies range from contentious to non-existent to collaborative. In areas like East Hollywood and Boyle Heights, CBOs have developed valued partnerships with public agencies; although, this is not always the case in communities throughout Los Angeles. The consensus among CBOs interviewed, even in areas with good partnerships, was that the relationship between CBOs and public agencies could be strengthened. Public agencies expressed interest and willingness to engage more with community stakeholders, but referenced the challenges of organizing and outreach in communities due to factors, like budgetary and staffing constraints.

Some CBOs work closely with the City Planning department, Metro, and Council Districts, while other CBOs felt undervalued or ignored altogether by public agencies in the TOD process. Generally, CBOs placed a greater priority on fostering a relationship than public agencies based on our interviews. Ideally, CBOs prefer to engage in a partnership with public agencies, working together early in the planning process to achieve common goals for their neighborhood. Public agencies also prefer early input from the public and community stakeholders but noted that a lack of research and organization in communities around TOD can be a challenge to policy-making. A public agency representative believed many CBOs should engage in more research to support their advocacy efforts around issues related to TOD. CBOs make their advocacy platform more persuasive with thorough research. According to the representative, advocacy campaigns by smaller CBOs lack focus and research support which inhibits the CBOs ability to clearly articulate arguments to public officials (personal communication, March 26, 2015). Another public agency staff member questioned whether CBOs truly represent

the interests of their area around TOD or instead have their own agendas to pursue. For instance, a CBO might rally in opposition to a new development in the area without considering how it benefits the larger community (e.g. increasing housing supply, public improvements to streetscape, etc.).

The tendency of public agencies to view council districts and neighborhood councils as the formal sources of community input can affect CBOs influence in the TOD process. Some CBOs also discussed the challenges of building relationships with elected officials because of term limits and constant changes in leadership. For instance, a change in Council District leadership can present new opportunities, but the CBO must start building the relationship from scratch. Newly elected council members might not be interested in the CBOs initiatives, making it difficult for CBOs to engage in the TOD process, according to interviews.

Community advocacy coalitions like ACT-LA believe public outreach is critical to achieving equitable plans, yet Metro and the City Planning Department are not always required to work with stakeholders outside of council districts and neighborhood councils (personal communication, April 4, 2015). In East Hollywood, Thai CDC, East Hollywood Neighborhood Council, and Metro are trying to form a partnership to create a small business incubator near the Hollywood/Western Station (personal communication, March 9, 2015). However, where CBOs are not actively involved in neighborhood councils, there is potential the CBO can be left out of the planning process.

Working with CBOs to more broadly engage the public can be extremely valuable to public agencies because CBOs and their staff members have often been

established in a community for decades. A CBO's establishment in an area often leads to long-term relationships with residents and business owners in the community. According to interviewees, Metro and the City Planning Department prefer greater input from established stakeholders, making CBOs a unique resource for community participation. A lack of communication and organization from both sides seems to have limited the formation of this partnership in certain areas in the past.

Advocacy groups like ACT-LA discussed that the frequent disconnect between the goals of community advocacy groups and the purpose of existing TOD planning policies is indicative of the need for more collaboration between CBOs and policy-makers. TOD-related plans implement the goals and policies of community plans and are part of the General Plan framework; they primarily focus on land use, such as increasing density of housing and commercial retail near transit corridors. CBO initiatives are often focused on broader community benefits like tenant rights, affordable housing, living wages, support for local hire and business, and access to open space and services. However, during by-right development, when a project meets all the requirements spelled out in the zoning code for a particular parcel, there is little the City or CBOs can do to intervene or require broader community benefits. Based on interviews with public agencies in the study areas, most of the TOD projects are by-right, making the City's role ministerial and the CBOs role non-existent in the development process.

The disconnect between TOD-specific plans and broader community benefits, highlighted in interviews with public agencies and CBOs, reveals a need for more

proactive policies and discussions around community benefits in TOD plans at the government level.

Challenges to Equity and Lessons Learned from Local Planning

Adopting and implementing policies related to equity is challenging. Equity, as it relates to TOD, is defined as recognizing the value of neighborhood's existing character, amenities, and residents and ensures that benefits brought by TOD are accessible to all residents. Social equity and displacement are main concerns for low-income communities and communities of color living around station areas where transit projects have been developed or are planned. We heard recurring concerns about the lack of equity in the TOD planning processes from community advocacy coalitions like ACT-LA and affiliated CBOs. These organizations have responded to the recent surge of investment in transit infrastructure by focusing their efforts on organizing and campaigning for equitable planning and investment around station areas (ACT-LA, personal communication, April 8, 2015). The most pressing concerns related to neighborhood change were limited community input during the TOD planning process and the limited policies and financing tools available to preserve existing low-cost housing and develop new affordable housing.

Limited opportunities and resources for community engagement were identified as challenges to successful community planning around TOD by both CBOs and public agencies. CBOs felt the common forms of public input, such as public hearings and community plan updates, are ineffective at encouraging public participation and capturing the input of all interested parties. According to organizers from LA Voice, rigid

public hearing agendas have constrained their capacity to advocate in formal public forums (LA Voice, personal communication, April 10, 2015). Public workshops, focus groups, planning charrettes, and other forms of community outreach are ways to more actively involve public participation.

City planners acknowledged that community outreach could be more effective at encouraging participation, but understaffing and packed public meeting agendas make rigorous outreach difficult. According to a city planner, evaluating community input around a project can be difficult because of scale; while immediate neighbors to an affordable housing development often voice their opposition, those who benefit are often underrepresented during public meetings (personal communication, April 10, 2015). A planner for the Southeast Los Angeles New Community Plan identified the formation of Community Plan Advisory Committees (CPACs) as an important tool for garnering community stakeholder input (LADCP, personal communication, April 10, 2015). CPACs are composed of neighborhood representatives, including residents and CBO members, who collaborate directly with the Department of City Planning throughout the community plan update process.

Affordable housing was considered a key tool for minimizing displacement, but interviews with CBOs and public agencies revealed an apparent need for more policy and financial support for both development and preservation of affordable housing. According to interviews with CBOs and the Planning Department, density bonuses and parking reductions are the main incentives available to promote affordable housing development (LADCP, personal communication, March 5, 2015). Based on public

agency interviewees, California's density bonus law has been popular in some areas but could require more in regards to public benefits (e.g. increased affordable housing requirements, living wage for employees, and green infrastructure) from developers. Furthermore, the dissolution of the Community Redevelopment Agency in 2012 and recent court rulings invalidating Los Angeles' inclusionary zoning ordinance have made affordable housing even more difficult to require and finance at the city-level.

Interviews with CBOs and public agencies affirm that regional or city-wide TOD zoning standards can help achieve more equitable development around transit for the future. Community coalitions like ACT-LA believe a citywide approach is best because effective policy is integrated at the highest levels of city government (ACT-LA, personal communication, April 8, 2015). A representative from CCED believes that housing and gentrification are regional issues, necessitating regional planning and analysis (CCED, personal communication, April 15, 2015). Re:code LA, the City of Los Angeles' ongoing update of the zoning code, was cited as a potential way to integrate TOD-specific regulations into the zoning code, helping simplify the planning process throughout the city (LADCP, personal communication, 2015). Standardizing zoning near transit with "plug and play" options can help streamline the development process around TOD, enabling City planners to dedicate more time to review projects. ACT-LA believes the challenge of city-wide TOD policy will be accounting for housing, economic mobility, and transportation while also recognizing the vast diversity of neighborhoods in Los Angeles (ACT-LA, personal communication, April 4, 2015). In light of these challenges, CBOs have utilized organization driven strategies to inform the character of TOD, described below.

CBOs: Strategies Used To Encourage TOD Equity

CBOs utilize a variety of strategies to promote the interests of marginalized communities in the face of displacement around rail stations. However, CBOs face difficulties in encouraging equity in TOD policy. CBOs use organizing and education, policy research, increasing community land control, and community benefit agreements to promote equitable TOD. While some CBOs focus on a specific strategy like community land control, many CBOs use multiple strategies to achieve their goals.

All CBOs interviewed organize local residents and businesses to fight for equitable TOD. Organizing has been used to advance community needs in specific developments or educate residents on the impacts of TOD. For example, the United Neighbors in Defense Against Displacement (UNIDAD) coalition's organizing effort mobilized community members leading to the inclusion of affordable housing and community serving retail in the Grand Metropolitan development in South Los Angeles (SAJE, personal communication, 2015). The effort was in collaboration with a number of organizations, including SAJE and the Esperanza Community Housing Corporation with the Public Counsel law firm negotiating the terms. CBOs in Highland Park, Boyle Heights, and South LA are using education as a means of uniting and empowering community members to ensure development provides positive community outcomes. The focus of organizing efforts range from renters' rights to technical aspects of city planning. For instance, in Highland Park, NELA Alliance recently held a tenant's' right workshops to inform residents of tenant protections and provide a space to share stories (personal communication, 2015). In South LA, SAJE regularly hosted the People's Planning School, while ELACC and LA Voice have both implemented TOD University programs

in Boyle Heights and East Hollywood. These gatherings are used to educate residents about the planning process and get them thinking about what they would like to see in their communities. CBO organizing and education tactics have been effective at uniting community members to dictate TOD. For example, an ELACC organizer discussed an organizing campaign to stop the construction of a CVS pharmacy in Boyle Heights that occurred through a joint development agreement between Metro and a private developer (East Los Angeles Community Corporation, personal communication, February 7, 2015). An affordable residential development is now being proposed for the site. CBOs have taken steps to make sure members are informed since they may not be involved in initial planning discussions and must advocate for greater equity.

Some CBOs are using research to promote equitable TOD policies by characterizing the problem and demonstrating how policy changes can help improve the conditions of vulnerable populations. LAANE has been researching policies and practices to determine how to bring in community-serving retail along the Blue line, which is known for its lack of development intensity near the stations (personal communication, February 13, 2015). LAANE's TOD policy agenda revolves around encouraging equitable investments in neighborhoods that provide good jobs and healthy options in South Los Angeles neighborhoods like Watts that have been overlooked (personal communication, February 13, 2015). ACT-LA is also pushing for a citywide TOD plan and more effective affordable housing policies (personal communication, April 4, 2015). Their hope is that a citywide TOD plan will increase community benefits, provide better incentives to developers for building affordable housing and help support local businesses (ACT-LA, personal communication, April 4, 2015). CBOs are able to

advocate for improved conditions for low income communities and communities of color by researching best practices within and outside of Los Angeles.

CBOs with the requisite resources have purchased and developed land for community use and to ensure perpetual housing affordability. Developers may not incorporate community input when forming plans for a new project. As a result, CBOs seek other strategies to ensure that community input is prioritized. These efforts can involve community land trusts focused on affordable housing. In South Los Angeles, there are example of both affordable housing development and the land trust method. Esperanza Community Housing Corporation has built a number of housing developments for families. Housing is an important component to their strategy because it helps families stay in their neighborhoods and avoid displacement (personal communication, February 19, 2015). TRUST South LA, believes that a CBO must own the land so that its community is considered a stakeholder by institutional organizations (personal communication, February 20, 2015). As an interviewee stated that purchasing property gave them a greater stake in the neighborhood and recognition by institutional organizations (TRUST South LA, personal communication, February 20, 2015). Community-controlled land allows CBOs to better dictate what they and their constituents would like to see developed and have more control over the development process.

Lastly, Community Benefit Agreements (CBAs) have been negotiated for a number of developments in and around TODs. Included in CBAs are provisions for labor, community resources, and affordable housing benefits for low-income residents. SAJE,

Esperanza Community Housing, and other South Los Angeles CBOs have negotiated a number of these agreements around South Los Angeles TODs. These South Los Angeles CBAs are important examples of equitable TOD, although they are outside this study's six station areas (Esperanza Community Housing, personal communication, 2015). An Esperanza Community Housing staff member highlighted a CBA negotiated by the UNIDAD coalition. This CBA applies to the Lorenzo market rate housing development near the Metro Blue line LATTC/ Ortho station. The site the Lorenzo development is located on what was formerly a community health center. This health center was lost after the land was sold to the developer by the Los Angeles Orthopaedic Hospital. The CBA required the developer to build a clinic as part of the development with no rent payments for community selected health care tenants for 20 years. The UNIDAD coalition's success in negotiating CBAs have inspired other CBOs to pursue negotiation of these agreements. For example, a representative from the Korean Immigrant Workers Alliance (KIWA) stated that the organization hopes advocacy efforts could amplify community concerns leading to a CBA for their constituents (personal communication, February 6, 2015). The prior success these organizations have had at obtaining CBAs has caused other organizations to see these agreements as avenues for equitable TOD.

CBOs are able to mitigate some of the issues associated with displacement around station areas through organizing and education, policy research, community control of land, and community benefit agreements. However, many CBOs acknowledged that more work needs to be done on a local and regional level to better protect marginalized communities from displacement.

Public Agencies: Plans and Policies to Promote Equitable TOD

Public agencies use plans and policies to encourage equitable outcomes in the TOD process. These plans encourage equity by requiring that developers provide community benefits like affordable housing as a condition of development. However, interviewees discussed that the cost of providing these benefits may discourage investment in station areas. CBOs also felt that plan standards encouraging equitable development in TOD plans must be enforced if equity provisions are to be effective. The policies described below represent ways that public agencies are working to encourage equity in TOD.

The Vermont/Western Transit Oriented District Specific Plan (SNAP) was adopted in 2001 (Vermont/ Western Transit Oriented District Specific Plan (Station Neighborhood Area Plan), 2001). It has been active the longest of the TOD plans discussed by interviewees. SNAP was developed in conjunction with the opening of the Metro Red Line and was created for the purpose of making station areas more livable, economically viable, and pedestrian friendly. Thai CDC collaborated with the City of Los Angeles and neighborhood stakeholders to conduct focus groups and visioning exercises to create an equitable vision for the area. The specific plan mandates equitable development through its community benefit elements. For example, SNAP's child care facility component requires mixed use or commercial projects with 100,000 square feet or more of nonresidential floor area to include childcare facilities to accommodate the needs of employees.

The Los Angeles City planners interviewed discussed multiple TOD plans that were recently implemented or are in development that provide community benefits through equity provisions. For example, the Cornfield Arroyo Seco Specific Plan (CASP) includes innovative regulations that allow market rate developers to build at a higher density if affordable housing is provided in the development (Cornfield Arroyo Seco Specific Plan). CASP applies to portions of Chinatown, Lincoln Heights, and Cypress Park that are bisected by the Gold Line. Interviews and research highlight the Boyle Heights Community Plan, the Los Angeles Transit Neighborhood Plans, and the Jordan Downs Urban Village Specific Plan as initiatives with the potential to create high-quality transit areas, protect community resources, and provide equitable economic opportunities. For example, the Jordan Downs Urban Village Specific Plan aims to improve connectivity between the aging Jordan Downs public housing project and the 103rd street/ Watts Towers station located a half mile west of the project. This plan has the potential to transform Jordan Downs into a mixed income development (City of Los Angeles, 2012). Importantly, the specific plan calls for a one to one replacement of existing affordable units. However, the redevelopment effort currently lacks funding needed to proceed (Garrison, 2013). TOD plans that are in development like the Boyle Heights Community Plan will incorporate bifurcated zoning regulations that provide developers with development incentives if affordable housing is built in market rate projects (Draft | Boyle Heights New Community Plan, 2014).

Public agencies are utilizing policy measures to address prominent TOD equity concerns like the provision of affordable housing. The City of Los Angeles' Affordable Housing Trust Fund was mentioned as a public funding source that supports affordable

housing development across the city and in TODs (Affordable Housing Trust Fund, 2014). Additionally, Metro has proposed reserving 35 percent of units built on Metro-owned property for low income residents. This may be accomplished by selling or leasing land for below market prices and establishing a trust fund to support affordable housing development (The Times Editorial Board, 2015). However, the financial feasibility of Metro's affordable housing policy is still being considered. Metro officials will provide a progress update on this policy during Metro's FY 2015 - 2016 budget session (Item 60: Public Transportation, Affordable Housing, & Environment, 2014).

Equitable TOD Plans and Policies: Evaluation of Impact

The Vermont/Western TOD Specific Plan (Station Neighborhood Area Plan) is the TOD plan that has been implemented for the longest time of the plans discussed. A Thai CDC staff member discussed an evaluation of SNAP's impact conducted by the organization. The evaluation indicated that the specific plan had achieved many of its affordable housing and neighborhood preservation goals (Thai CDC, personal communication, February 17, 2015). However, the staff member mentioned that some developers have objected to SNAP's local hiring and child care space requirements. As a result, SNAP's community benefit elements may impede neighborhood economic development if developers cannot obtain a variance from requirements. A Council District 13 staff member echoed these sentiments (personal communication, April 16, 2015). He stated that the cost of providing community benefits might discourage developers from investing in the specific plan area. The staff member believes TOD plans should not regulate development to the extent that they stifle economic growth.

The Cornfield Arroyo Seco Specific Plan (CASP) is a recently adopted TOD plan with potential to promote equitable TOD. However, the impact of CASP's affordable housing and neighborhood preservation provisions are uncertain because the specific plan was recently implemented. A Los Angeles City planner involved in CASP's development believes its development standards will encourage a variety of housing types in the plan area leading to a vibrant, diverse community. She highlighted a new adaptive reuse project that converted a warehouse into commercial kitchen space for food production startups. It is too early to evaluate how the plan will impact residential development. However, blogs such as LA Curbed have discussed that projects approved before CASP implementation have avoided the specific plan's equity provisions (*Chinatowners Say 20-Story-Mixed-Use Will Be Too Dense and Too Gentrifying*, 2015). This issue aligns with the belief of a SEACA staff member that the City must enforce the rules of TOD plans if their provisions are to encourage equitable TOD (personal communication, February 4, 2015).

Los Angeles City planners discussed how the BHCP was one component of a citywide TOD planning effort (Planning Department, City of Los Angeles, personal communication, March 18, 2015). These planning efforts establish development standards for portions of Metro rail lines, viewing stations as nodes on a larger transit corridor rather than isolated sites for development. The BHCP update also utilizes bifurcated zoning, which provides development incentives like increased density if affordable housing is provided. For example, a development around a rail node that does not provide affordable housing or community amenities has a maximum height of two to four stories and a maximum floor area ratio of 1.5:1. This means that developers can only

build one and half times the area of the lot (Draft | Boyle Heights New Community Plan, 2014). However, the FAR can increase to a maximum of 3:1 and a maximum height limit of four stories if affordable units are provided. This benefits developers by allowing them to maximize the economic value of their development and benefits low income households through the provision of affordable units. Other initiatives like the Los Angeles Transit Neighborhood Plans are creating TOD specific plans for the Exposition and Crenshaw/ LAX lines. The planners discussed that the Transit Neighborhood Plans may also utilize bifurcated zoning affordable housing incentives (Planning Department, City of Los Angeles, personal communication, March 18, 2015).

TOD policies: Evaluation of impact

The Los Angeles Affordable Housing Trust Fund was mentioned by a representative from Council District 13 as a means of supporting affordable housing development around TODs (personal communication, April 16, 2015). For example, 77% of projects receiving trust fund support in 2014 were near Metro transit stations and incorporated TOD elements (Affordable Housing Trust Fund Stakeholder Meeting, 2014). However, the trust fund's continued funding is tenuous and will decrease if the City elects to reallocate monies to other areas of the budget. The fund was established in 2000 with seed funding of \$5 million from the Los Angeles Housing + Community Investment Department (Affordable Housing Trust Fund 2014). The annual total funding amount peaked in 2008 at \$108 million through a combination of monies from former redevelopment agencies, federal agencies, and City general funds (Reyes, 2014). The AHTF's funding allocation declined to a low of \$26 million in 2014 which is attributed to the loss of tax revenues when California's redevelopment agencies were disbanded and

overall decreases in funding support from the federal government. While the existence of this policy is tenuous, it provides needed funding support for affordable housing development which may occur in TODs.

Metro is considering a policy requiring 35 percent of residential units built on its properties to be priced as affordable to low income households (Item 60: Public Transportation, Affordable Housing, & Environment, 2014). The exact federal affordability levels units will be priced for was not mentioned. Although the feasibility of this policy is being evaluated, it has potential to address housing affordability concerns raised by many interviewees. Metro has identified 19 properties that are suitable for affordable housing development. Properties near the 1st/ Soto, Cesar Chavez/ Soto, and Mariachi Plaza Gold Line stations were considered most suitable of the properties identified. However, East Los Angeles CBOs like Union De Vecinos and planners working with the Boyle Heights Community Plan update have highlighted community concern that prices for proposed units may be unaffordable to neighborhood residents (Union De Vecinos, personal communication, February 14, 2015, Boyle Heights Community Plan Update, personal communication, March 18, 2015). Although this debate is occurring, Metro's proposed policy indicates that the organization is taking steps to consider TOD equity.

The specific plans discussed advance some equitable TOD goals if their standards are enforced. Importantly, stakeholders developing future TOD plans must determine how to control development and encourage developers to provide community benefits without discouraging developer investment. The policies highlighted by interviewees

represents a way that public agencies are supporting affordable housing development near rail stations. Although public agencies are working to encourage TOD equity, CBOs believe additional work must be done to ensure TOD benefits all members of a community. We have developed four recommendations to guide future equitable TOD efforts that are based on conversation with both parties.

Recommendations

Although interviews indicate that public agencies are actively encouraging equity in the TOD process, discussion with CBOs finds that TOD plans and policies may not lead to sustainable and socially inclusive development at the scope intended. We have created four high priority recommendations based on interviews that address areas of ongoing concern in the TOD process. These recommendations are:

- *The City of Los Angeles should define characteristics of equitable TOD in order to craft a citywide TOD plan with measurable equity objectives*
- *Metro should make equal investments in bus service for TODs with high bus ridership*
- *Los Angeles public agencies should engage more frequently with CBOs at community events and trainings*
- *Established CBOs with research expertise and greater advocacy capacity should share their expertise and capacity with small CBOs to foster a stronger advocacy platform*

The City of Los Angeles should define characteristics of equitable TOD in order to craft a citywide TOD plan with measurable equity objectives

A Council District 14 staff member stated that discussing methods of addressing negative externalities of TOD with stakeholders has been difficult (personal communication, March 9, 2015). Discussion was difficult because his constituents could not determine if TOD results in negative changes such as resident displacement. Although establishing a causal relationship between TOD and its negative externalities cannot be established, research (Pollack et al, 2010) suggests that TOD is correlated with negative changes like displacement. His constituents agree their neighborhoods are changing. However, they are unsure how to define the positive and negative characteristics of this change. Therefore, they struggle to find solutions to problematic changes like displacement. This disconnect in the conversation can be addressed by defining the characteristics of equitable and inequitable TOD in Los Angeles. Characteristics of equitable TOD can involve mandated or incentivized affordable housing development and community benefits which are seen in existing TOD plans and Community Benefit Agreements. Inequitable TOD might be characterized by increased rental rates that Union De Vecinos believes have resulted from increased property values and development interest around the Mariachi Plaza station (Union De Vecinos, personal communication, February 14, 2015). We acknowledge that TOD can provide benefits to neighborhood residents and is not entirely inequitable. However we believe stakeholders could better determine how benefits can be equitably allocated if a standard definition of equitable TOD was established. Negative externalities of Los Angeles TODs highlighted

in interviews were: 1) increased real estate activity resulting in the loss of affordable housing, 2) residential and commercial development that is not affordable to low income residents and businesses, and 3) the loss of area businesses and well utilized services.

This definition should be established through collaboration between CBOs and public agencies so multiple perspectives are represented. For the purposes of this study, we propose a Los Angeles specific definition of equitable TOD based on interview findings:

Equitable TOD recognizes the value of a neighborhood's existing character, amenities, and residents and ensures benefits brought by TOD are accessible to all residents. Equity in this definition can be quantified by measuring changes to characteristics of neighborhood residences, businesses, amenities, and character.

This definition of equitable TOD should serve as the basis for a citywide TOD plan with measurable equity objectives.

The ACT-LA staff member stated that TOD planning has occurred in a piecemeal fashion with little coordination across the city (personal communication, April 8, 2015). The Los Angeles City and County's TOD planning efforts apply only to specific portions of Metro rail lines. Based on interviews and secondary research of City and County TOD planning efforts, we recommend that stakeholders and public agencies develop a citywide TOD plan with community benefit requirements that advance measurable equity objectives. For example, a housing affordability objective should require a percentage of all housing units in an area to be affordable to low income households. This objective could be achieved by incorporating community benefit related provisions like bifurcated

zoning. The objective would have a larger reach and more immediate effect if it was established citywide so all station areas fell under its requirements. Accountability to equity objectives will be encouraged by using a survey to establish a baseline of characteristics for station areas citywide. This will allow local stakeholders to monitor whether equity objectives are being advanced at each station.

Characteristics of residential, commercial, and local amenities for city station areas should be established by using a modified version of this study's street and parcel level groundtruthing survey (see *Groundtruthing Gentrification Around LA's Metro Stations: A Tool to Study Changes in the Built Environment*). This survey can provide a method of measuring whether equity objectives have benefitted residents surrounding city TODs. The survey should be administered by CBOs at station areas across the city. This survey can document existing public infrastructure and the character of neighborhood businesses. Survey data should be used to establish a baseline for station area characteristics. The parcel level survey would also incorporate rental rates and sale prices for residential developments so affordable housing equity objectives can be evaluated. The rate of survey implementation will be flexible since certain neighborhoods may change more rapidly than others. Importantly, these surveys can encourage accountability toward the plan's equity objectives through close monitoring. A citywide-TOD plan based around a local definition of equitable TOD can encourage greater equity in the TOD process.

Metro should make equal investments in bus service in TODs with high bus ridership

East Los Angeles CBOs stated that existing TODs place too much emphasis on rail transit. Buses were noted as the dominant mode of public transportation for existing low-income residents in two study areas. Therefore, increasing the frequency of existing bus service in these areas can positively impact residents that rely on bus transit.

An ELACC organizer stated that Boyle Heights residents use the bus more than rail transit (East Los Angeles Community Corporation, personal communication, February 7, 2015). This statement is supported by Metro boarding and alighting data for the 2013 to 2014 fiscal year showing that Mariachi Plaza has the lowest rail ridership of the six stations examined (Ong, Paul., & Los Angeles Metro. June 2013 - June 2014). This suggests that neighborhood residents are using other modes like bus transit to commute. However, this neighborhood experienced changes in bus service that negatively impacted bus reliant residents after the Gold Line was introduced (Union De Vecinos, personal communication, February 14, 2015). The ELACC organizer noted that the rerouting of Line 30 off Cesar Chavez Street onto 1st street lowered the ease in mobility of Boyle Heights residents (East Los Angeles Community Corporation, personal communication, February 7, 2015). Commuting difficulties also resulted from schedule cuts to Line 620 and the elimination of Line 31 after the Gold Line was established (Galindo 2014). The reduction in bus service was seen by East Los Angeles CBOs as a loss of mobility for long-term residents of these neighborhoods. Bus service in high ridership neighborhoods should not be reduced if buses are the preferred mode of residents.

Los Angeles public agencies should engage more frequently with CBOs at community events and trainings

We encourage public agencies like the City of Los Angeles to engage more frequently with CBOs outside the public hearing process. If effective, CBOs serve as the voice of community members and have long term relationships with them. CBOs advocate for community members in the political process and can provide public agencies with perspectives they might normally not be exposed to. These organizations can garner needed support for public agency TOD initiatives if dialogue between both parties occurs more often.

Although public input is a required element in the planning and development approval processes, organizers from LA Voice stated that rigid public hearing agendas have constrained their capacity to advocate within this framework (LA Voice, personal communication, April 10, 2015). The ability for CBOs to advocate during hearings is critical because the organizations represent residents whose perspectives may not be heard because of language barriers or an inability to attend hearings. A CCED organizer also highlighted a gap in communication between residents and the City Planning Department (CCED, personal communication, April 15, 2015). While communication issues are not intentional, the organizer stated that residents are unsure of who to consult when they want to know about future development plans for their neighborhood. CBO comments suggest that more engagement outside the standard public hearing process could benefit relationships between both parties and lead to greater equity in TOD. Increased engagement outside the standard public comment process would see public agencies establishing a greater presence at community events. Many CBOs like ELACC

conduct TOD workshops with their members to educate them about the planning process. Public agencies like Metro or the City of Los Angeles could attend these workshops since they allow more time to hear community issues and discuss their work. Frequent discussion outside the public hearing process can benefit both parties. CBOs will have more opportunities to voice community concerns and negotiate community benefits. Public agencies will have more time to understand needs of underrepresented community members and generate support for their initiatives.

Established CBOs with research expertise and greater advocacy capacity should share their resources with small CBOs to foster a stronger advocacy platform

Established CBOs with research expertise and greater advocacy capacity should share their resources with small CBOs to foster a stronger advocacy platform. For example, a Council District 1 staff member felt many CBOs did not support their advocacy efforts with research and struggled to clearly argue for their concerns to public officials (personal communication, March 26, 2015). The staff member discussed what he felt was a successful CBO advocacy campaign that focused on reform of the Quimby Act. The organization articulated their concerns clearly and supported their arguments with a research driven policy brief. Advocacy campaigns by small CBOs may lack focus and research support because the CBOs do not have needed expertise and capacity.

Advocacy and research support from established CBOs can strengthen campaigns of smaller CBOs and can create an overall stronger equitable TOD platform. Coalitions like ACT-LA have developed around an equitable TOD objective. Alliance affiliates like LAANE have broad research expertise and have contributed this expertise to smaller

CBOs. LAANE provided legal and policy research to a Chinatown collective that included CCED and SEACA that worked to prevent the development of the Chinatown Walmart (LAANE, personal communication, February 13, 2015). LAANE's research informed a lawsuit arguing that Walmart failed to receive necessary building permit approval to occupy a Chinatown retail space (Zahniser, 2013). The lawsuit argued that the grocery chain needed to receive approval from the Los Angeles Community Redevelopment Agency because the space was developed with CRA funding. We believe the campaign was strengthened by LAANE's contribution and had the research support public officials have asked for. We urge ACT-LA's affiliates to support the work of smaller CBOs as part of its future advocacy work. However, many smaller CBOs concerned about TOD equity are not part of the alliance. ACT-LA is working to establish relationships with many CBOs across the city (ACT-LA, personal communication, April 8, 2015). These CBOs may be reluctant to join the alliance because their initiatives do not align with ACT-LA's platform. While these relationships may be difficult to form, we believe, equitable TOD advocacy efforts will be strengthened if CBOs share resources and experience, creating a stronger advocacy platform.

Conclusion

Based on discussion with public agencies and CBOs, we recommend that **1) the City of Los Angeles should develop a citywide TOD plan with measurable equity objectives 2) Metro should make equal investments in bus service in TODs with high bus ridership 3) Los Angeles public agencies should engage more with CBOs outside the public hearing process 4) Established CBOs with research expertise and greater**

advocacy capacity should share their resources with small CBOs to foster a stronger advocacy platform. The widespread implementation of TOD across Los Angeles underscores the need to consider equity in the TOD planning process. Indeed, TOD has the potential to improve the health and mobility outcomes of low income neighborhood residents if benefits are equally distributed. While there is much work to be done to ensure benefits are accessible to all individuals, we believe in the potential this development type has to improve the quality of life for Los Angeles residents.

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CHAPTER 6: CONCLUSION¹⁰

This comprehensive project gathered primary data and information through surveys, systematic observations, and interviews to assess the impacts of transit oriented development (TOD) in disadvantaged neighborhoods in Los Angeles. The goal was to generate a better understanding about the nature of neighborhood change in order to enhance the effort to promote equitable sustainable development. Transit investments are public investments; therefore, there should be a public obligation to ensure that all stakeholders share in the direct and indirect benefits. While TOD has the potential of benefiting neighborhoods through positive change, there is considerable fear that TOD can also lead to rampant gentrification and displace more established local residents and businesses. Equity-oriented policies and plans are needed to ensure balanced development that benefits all stakeholders. Developing such policies and plans should be grounded in an empirical understanding of the nature and magnitude of changes around transit stations.

The project's study sites included the areas around six Metrorail station areas: 103rd Street/Watts Tower (Blue Line opened 1990), Chinatown (Gold Line opened 2003), Highland Park (Gold Line opened 2003), Hollywood/Western (Red Line opened 1999), Mariachi Plaza (Gold Line opened 2009), and Vermont (Expo Line opened 2012). The neighborhoods are predominantly people of color and low-income residents. The research team collected 664 surveys of rail users, over 60 customer surveys,

¹⁰ The following is based in part on lecture by Professor Paul Ong and class discussion lead by Professor Paul Ong and Silvia Jimenez.

observational assessment of over 10 businesses, “groundtruthing” of 98 blocks and 180 parcels, and 30 interviews of community based organizations and public agencies.

Given the resources and time constraints, the project covers only a few aspects of the phenomenon. Despite these limitations, the project has produced useful information and empirical results, which are presented in Chapters 2 through 5. A major cross cutting finding from the project is that the neighborhood changes are complex, occurring over many years and varying across places. The diversity of outcomes is very apparent in the substantial variation in the level of transit usage across neighborhoods, resulting in disparities between those who benefit from transit investments. Hollywood/Western has experienced noticeable changes, and the challenge has been to influence development to ensure that local residents and businesses are not adversely affected. Other areas such as 103rd Street/Watts Tower have experienced little development, although it is an area that would benefit from more job-creation investments. This enormous heterogeneity leads to an important recommendation that is consistent with the often overused but nonetheless very appropriate cliché “one size does not fit all.” Policies and plans must accommodate the specific circumstances, unique needs, and potential opportunities of each neighborhood.

At the same time, policies and plans must incorporate equity principles and goals, concrete and measurable equity objectives, and adequate resources and funding for full implementation. Some of these elements are in place, such as those included in SB 375, California’s Sustainable Communities and Climate Protection Act of 2008, which includes the promotion of affordable housing as a part of sustainable community

strategies. The state has also set aside funds from its cap-and-trade program to assist disadvantaged communities. We believe that such explicit legislative and funding commitments should be also widely adopted at the regional and local level (as well as the national level). This can be done by adopting best practices from other locations, such as the extensive social-equity TOD efforts in the Puget Sound region and the City of Seattle.

Moreover, there appears to be a need in this region for a well-conceived, better coordinated, and adequately funded collaborative effort to promote equitable development around transit stations. Comprehensive planning is challenging because responsibility and authority are divided among numerous public agencies. At its worst, planning becomes fragmented and disjointed efforts with only partial coverage. At its best, there is synergy and multiple sources of funding. Clearly the latter is desirable, and this will require leadership. A critical element of effective planning is meaningful participation by local stakeholders, who are in the best positions to understand and articulate their concerns, priorities, and aspirations. Community-based organizations can play a critical role in representing neighborhood perspectives and advocating for social justice.

One key element to the successful implementation of equity policies and plans is ongoing monitoring and evaluation of changes and performance. If done in a timely fashion, the findings can be used to make necessary modifications to policies, plans, and programs to ensure equitable outcomes. Some of the methods used in this project should be adopted as a part of the monitoring system. There are also other related analytical projects that complement the efforts of this project to assess the consequences of TODs.

This includes the project “Developing a New Methodology for Analyzing Potential TOD Displacement,” which is funded by the California Air Resource Board.