

# Promote Neighborhood Character: A Case Study Of Pike/Pine Neighborhood

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**Abstract**

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Neighborhood character means “a set of qualities that make a place or thing different from other places or things”. The Pike/Pine Neighborhood has its unique neighborhood character, which embodies the transformation of Seattle’s original “auto row”. Nowadays, there are both threats and opportunities in front of Pike/Pine neighborhood character. To explore how to promote neighborhood character under this circumstance, this thesis studies the Pike/Pine Neighborhood from two aspects: 1) measuring distributions of neighborhood character with quantitative method and 2) assessing conditions of neighborhood character with qualitative method. Then, based on findings, this thesis proposes several suggestions on how to promote the Pike/Pine Neighborhood character in the future.

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# 1 Introduction

## 1.1 Genesis

When I took Urban Design and Preservation Specialty Studio in autumn quarter 2015, I was working together with Manish Chalana on projects in the Pike/Pine Neighborhood. Because of this studio, I first learned about this neighborhood's unique character, which finally drove me to focus on Pike/Pine neighborhood as case study in my thesis. Its location in Seattle and boundary can be found in Figure 1-1 and Figure 1-2.

During the process of collecting data, I began to realize that most studies on Pike/Pine neighborhood were about conserving existing character from a historic preservation perspective, and there was almost no study on how to actively promote its character in the future from an urban design angle. This study was planning to fill in this gap.



Figure 1-1 Pike/Pine Neighborhood in Seattle



**Figure 1-2 Pike/Pine Neighborhood**

## 1.2 Objectives Of This Thesis

Focusing on promoting Pike/Pine neighborhood character, this thesis begins with a literature review on relevant studies, then moves forward to investigate current conditions of the Pike/Pine neighborhood, and finally makes suggestions for the future. Here are descriptions of four specific objectives:

- Literature review on relevant studies

The first objective of this thesis is to review the literature on three topics: 1) issues and problems; 2) methods of research; and 3) context of the site. This helped me figure out what I need to do in next steps.

- Measure distributions of neighborhood character

This thesis then measures distributions of Pike/Pine neighborhood character with quantitative methods and export maps as an outcome. This location-specific analysis

helped me understand different places' strengths and weaknesses on neighborhood character.

- Assess conditions of neighborhood character

Paralleling with the second objective, this thesis assesses conditions of Pike/Pine neighborhood character with qualitative methods, which include typology and ground-truth analysis. This character-specific analysis helped me clarify different neighborhood characters' profiles and problems.

- Make suggestions on future's development

Finally, based on measurement and assessment, this thesis makes several specific suggestions on how to actively promote neighborhood character. These suggestions are intended to be references for residents, stakeholders, urban planners, architects and etc., which are all related to this neighborhood's future development.

## 1.3 Introduction to Case

### 1.3.1 Unique Neighborhood Character

According to "City of Seattle Pike/Pine Conservation Study: Phase 1 Report", Seattle's Pike/Pine neighborhood of Capitol Hill embodies the transformation of Seattle's original "Auto Row," a neighborhood of lofts and warehouses within a five- or ten- minute walk to downtown, from scruffy bohemian counterculture into tony shops, restaurants, and condominiums." <sup>1</sup> These physical and intangible elements together constitute the uniqueness of Pike/Pine neighborhood character, which distinguishes it from other neighborhoods in Seattle.

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<sup>1</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.  
[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

Visiting the neighborhood, people could see architecture styles from different time periods, ranging from auto row buildings in the 1930s to modern apartments in the 2010s, which are living records of how this neighborhood transformed over time. Moreover, there are diverse uses in these buildings, which include not only big chain stores but also small and locally owned businesses. People living in the neighborhood have abundant housing options with various types, rental price, unit sizes, etc. On the other hand, these abundant housing resources are able to accommodate a diversified community with residents from different age, income and racial groups. These scenes embody the Pike/Pine neighborhood characteristics voiced many times by neighborhood stakeholders: architecture, use, culture, housing and community of neighbors.<sup>2</sup>

### 1.3.2 Decaying Neighborhood Character

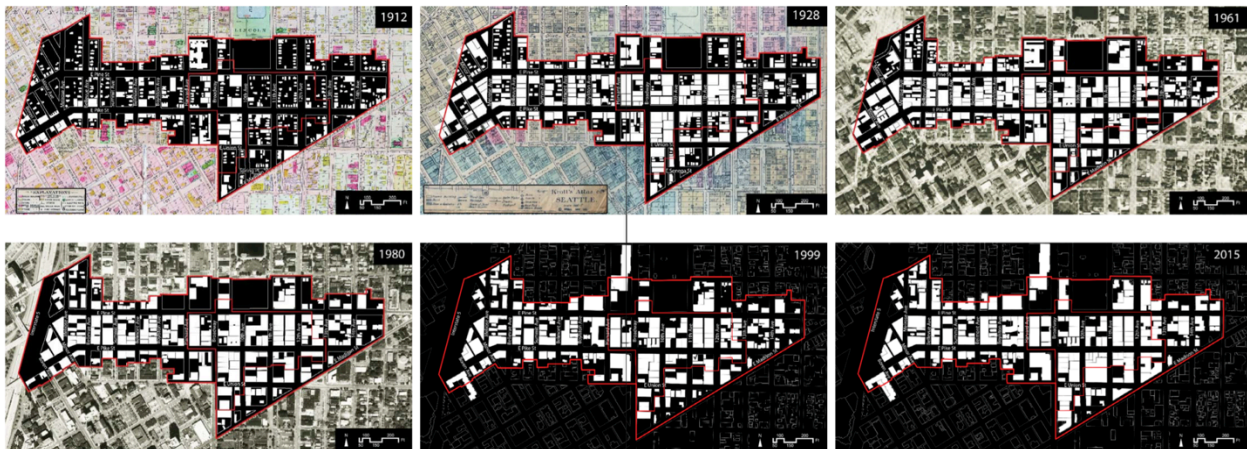
Pike/Pine neighborhood has experienced rapid change in the past few decades. Table 1 and Figure 1-3 demonstrate the evolution of open and built space in the Pike Pine Conservation Overlay District (PPCOD), which occupies the majority of this neighborhood. According to Table 1, the percent of open area in PPCOD has decreased 6.1% in 16 years from 1999 to 2015, which is a departure from the 3.8% decrease in the previous 19 years from 1980 to 1999. This rapid change has had a negative impact on Pike/Pine neighborhood character. For example, lots of characteristic buildings were demolished, and many small businesses moved away in the process.

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<sup>2</sup> Lund Consulting, Inc, Pike/Pine Neighborhood Conservation Study, 2008 (Interviewees: Maria Barrientos; Kathleen Brooker, Historic Seattle; Liz Dunn, Dunn & Hobbes; Betsy Hunter, Capitol Hill Housing; Matthew Kwatinetz, Capitol Hill Arts Center; Dr. John McMahon, Director of Facilities, Seattle Central Community College; Mike Malone, Hunter's Capital; Kateri Schlessman, Seattle University, Office of Land Use; Robert Sondheim, Rosebud Café; Chip Wall, Pike/Pine Urban Neighborhood Council.)

**Table 1 Evolution of Open and Built Space in Pike Pine Conservation Overlay District (PPCOD)<sup>3</sup>**

Year	Percent of Open Area	Open Area (Acre)	Built Area (Acre)
1912	81.9%	86.8	19.2
1928	66.7%	70.8	35.2
1961	62.1%	65.8	40.2
1980	64.6%	68.5	37.5
1999	60.8%	64.4	41.6
2015	54.7%	58.0	48.0



**Figure 1-3 Evolution of Open Space in PPCOD<sup>4</sup>**

Although the city recognized Pike/Pine as its first conservation overlay district in 2009 in order to preserve its historic environment and neighborhood character, this area's overall sense of place is rapidly transforming from fine-grained authentic, grungy, and alternative

<sup>3</sup> Chalana, Manish (ed.). *Studio Report: URBDP 508 Urban Design & Preservation Specialty Studio - Autumn 2015*. Unpublished Report, 2015.

<sup>4</sup> Chalana, Manish (ed.). *Studio Report: URBDP 508 Urban Design & Preservation Specialty Studio - Autumn 2015*. Unpublished Report, 2015.

to upscale, trendy, and manufactured.<sup>5</sup> Real estate development has increased economic pressure to demolish older buildings, reduced affordability for artists, students and young people, and introduced buildings that are alien and insensitive to the neighborhood character.<sup>6</sup> These demolitions and developments have gradually degraded the original character of this neighborhood's physical and intangible environment. Finally, the neighborhood has lost its Fringe Festival and the Gay Pride Parade, and stakeholders say there is less street culture than existed previously.<sup>7</sup>

### 1.3.3 New Opportunities for Neighborhood Character

The City of Seattle has designated the Pike/Pine neighborhood as an "Urban Center Village", which is a part of Seattle's Urban Village strategy.<sup>8</sup> It means that this neighborhood needs to accommodate more changes, businesses and people in the future.

Additionally, neighborhood character itself is emphasized in Seattle's comprehensive plan (2005)- "The Urban Village strategy tries to match growth to the existing and intended character of the city's neighborhoods."<sup>9</sup> As a result, in this process, planners need to not only think about growth as an impact on neighborhood character, but also as an opportunity. Those potential changes may conflict with conservation, but they are also a motivational power for promoting neighborhood character and improving this neighborhood's environment as a whole.

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<sup>5</sup> Chalana, Manish. 2014. "Conservation Overlay Zoning And Neighborhood Character: Pike/Pine, Seattle". In *Heritage 2014 – Proceedings Of The 4Th International Conference On Development*. Green Lines Institute.

<sup>6</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

<sup>7</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

<sup>8</sup> City of Seattle, Department of Planning and Development. 2016. City Of Seattle Comprehensive Plan., Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016610.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016610.pdf).

<sup>9</sup> City of Seattle, Department of Planning and Development. City of Seattle Comprehensive Plan. Seattle, 2005

On the other hand, neighborhood character cannot be static or unchangeable and change reflects the vitality and resilience of a neighborhood. The most important thing for Pike/Pine neighborhood is managing change, in order to keep the uniqueness and continuance of Pike/Pine neighborhood character.

## **2 Literature Review**

### **2.1 Issues and Problems- Neighborhood Character**

Merriam-Webster Dictionary defines “character” as “a set of qualities that make a place or thing different from other places or things”. This definition emphasizes two points: 1) it is a set of qualities; 2) it makes a place different from others. Therefore, we may understand “neighborhood character” here as a set of qualities that makes a neighborhood different from other neighborhoods.

The American Planning Association (APA) has its annual lists of great neighborhoods in U.S., and it also publishes guidelines for great neighborhoods, which includes several questions about neighborhood character.

- What makes the neighborhood stand out? What makes it extraordinary or memorable? What elements, features, and details reflect the community's local character and set the neighborhood apart from other neighborhoods?
- Does the neighborhood provide interesting visual experiences, vistas, natural features, or other qualities?

- How does the architecture of houses and other buildings create visual interest? Are the houses and buildings designed and scaled for pedestrians?
- How is local history retained, interpreted, and used to help create a sense of place?
- How has the neighborhood adapted to change?<sup>10</sup>

It is surprising to me that the above questions only involve elements of the built environment, but there is no social component. According to research on APA's annual "Great Neighborhood" by Talen et al., APA's Great Neighborhoods represent a somewhat classic conception of the historic, gentrifying urban neighborhood: walkable, gridded and losing social diversity. It is further argued that the APA could use its Great Neighborhoods designation to recognize planning, policy and design efforts in service of not only design excellence, but also social inclusion.<sup>11</sup> Therefore, this thesis included not only physical elements but also intangible components in the study of Pike/Pine neighborhood character. Neighborhood stakeholders describe them in the following five categories:

- Architecture- one to three stories, early twentieth-century, loft style, former automobile sales and repair, warehouses. Frequent use of brick and concrete, extensive glazing. New architecture is high quality and harmonious.
- Uses- local, unique, independent and small-scale retail; small-scale commercial and office space; work and performance space for artists; residential; nightclubs, bars, restaurants and cafés; some gay-specific businesses, bars, and services; education and training; and some remaining auto-oriented businesses. "Gritty and authentic" are used to describe this neighborhood.

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<sup>10</sup> "Characteristics And Guidelines Of Great Neighborhoods". 2016. *Planning.Org*. <https://www.planning.org/greatplaces/neighborhoods/characteristics.htm>.

<sup>11</sup> Talen, Emily, Sunny Menozzi, and Chloe Schaefer. "What Is a "Great Neighborhood"? An Analysis of APA's Top-Rated Places." *Journal of the American Planning Association* 81, no. 2 (2015): 121-41.

- Culture- nightlife and restaurants, gallery and performing spaces; diverse — gay culture, alternative, youth and students. Importance of street activity.
- Housing- over 90% renters, with several hundred subsidized housing units.
- Diversity- a neighborhood that residents value and show their interest by being active in neighborhood issues. There is a diversity of people with respect to ages, incomes, appearance, and sexual orientation.<sup>12</sup>

In these five categories, “architecture” and “housing” are physical elements, and “use”, “culture” and “diversity” are intangible components.

There have been large numbers of studies on Pike/Pine neighborhood character from different perspectives. Cecelia Gunn’s thesis “Protecting Seattle’s Auto Row: Next Steps For The Pike Pine Conservation District” and Amber Elena Piona’s thesis “Protecting Neighborhood Character: Pike/Pine’s Conservation Overlay District” studied policy issues and especially “Pike Pine Conservation Overlay District” (PPCOD) ordinances on protecting neighborhood character.<sup>13</sup> “Pike/Pine Conservation Neighborhood Study” by Lund Corporation, identified those five categories of Pike/Pine neighborhood character above, and conducted some basic investigations.<sup>14</sup> Manish Chalana reviewed the effectiveness of PPCOD ordinance through a review of redevelopment projects in this neighborhood.<sup>15</sup> “Pike/Pine Existing Design Characteristics” summarized different elements of built

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<sup>12</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

<sup>13</sup> Gunn, Cecelia. *Protecting Seattle's Auto Row : Next Steps for the Pike Pine Conservation District*. 2010. Piona, Amber Elena, and Chalana, Manish. *Protecting Neighborhood Character : Pike/Pine's Conservation Overlay District*. Seattle]: University of Washington, 2015.

<sup>14</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

<sup>15</sup> Chalana, Manish. 2014. "Conservation Overlay Zoning And Neighborhood Character: Pike/Pine, Seattle". In *Heritage 2014 – Proceedings Of The 4Th International Conference On Development*. Green Lines Institute.

environment in Pike/Pine neighborhood, like architectural elements and pedestrian environment.<sup>16</sup>

However, among all previous studies, there has been no systemic research or investigation in Pike/Pine neighborhood that focuses on the current neighborhood characteristic distribution and condition. Moreover, most previous research tended to overlook those intangible components in this neighborhood. This thesis is intended to fill in this gap with measurement and assessment of both physical and intangible elements in Pike/Pine neighborhood.

## 2.2 Methods of Research- Measuring Distributions of Neighborhood Character

Various scholars and experts have conducted studies on neighborhood character based on mapping and quantitative assessment. But, most of these researches separated physical elements and intangible components, and only examined connections between characteristics of built environment and its outcomes, like housing affordability, social diversity, pedestrian counts and business development. For example, Christopher and Mariela did an economic analysis of a sample of neighborhoods in the Washington, D.C. metropolitan area using walkability measures, and got findings like “more walkable places perform better economically” and “residents of more walkable places have lower transportation costs and higher transit access, but also higher housing costs”.<sup>17</sup>

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<sup>16</sup> Sellin, Dennis. "Pike Pine Existing Design Characteristics." Pike Pine Existing Design Characteristics. May 9, 2010. Accessed May 20, 2016.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016699.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016699.pdf).

<sup>17</sup> "Aaron Renn On Generating And Preserving Diversity". 2012. Citybuilderbookclub.Org. <https://citybuilderbookclub.org/2012/02/23/aaron-renn-on-generating-and-preserving-diversity/>. Koster, H. R. A., J. van Ommeren, and P. Rietveld. 2013. "Is The Sky The Limit? High-Rise Buildings And Office Rents". *Journal Of Economic Geography* 14 (1): 125-153. doi:10.1093/jeg/lbt008. Leinberger, Christopher, and Mariela Alfonzo. 2012. "Walk This Way: The Economic Promise Of Walkable Places In Metropolitan Washington, DC.". The Brookings Institution. Sardari, Sayyar and Lars Marcus. 2013. "Designing Difference:

There was a representative report “Older, Smaller, Better: measuring how the character of buildings and block influences urban vitality” conducted by the National Trust for Historic Preservation and Preservation Green Lab. Based on statistical analysis of three major cities in America (San Francisco, Seattle, Washington, D.C.), this report concluded that neighborhoods with a mix of older, smaller buildings perform better than districts with larger, newer structures when tested against a range of economic, social, and environmental outcome measures.<sup>18</sup>

Study approaches and methodologies of this report could be reference for future studies on neighborhood character that use quantitative methods. There were two research objectives claimed in this report: 1) assess the contributions of older, smaller buildings to economic social and cultural vitality; 2) create a methodology for measuring the performance of older, smaller buildings that can be used to inform plans, policies, and sustainability metrics in communities nationwide.<sup>19</sup>

In order to measure relationships between characteristics of buildings and blocks, and measures of urban vitality, this study assembled and geocoded disparate datasets and then analyzed that data with spatial statistics. It overlaid a grid of 200-meter-by-200-meter squares across these three cities, and evaluated the relationships between characteristics

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Interpreting And Testing Jane Jacobs Criteria For Diversity In Spae Syntax Terms". In Ninth International Space Syntax Symposium. Sejong Unviersity Press.

<sup>18</sup> Preservation Green Lab. *Older, Smaller, Better: Measuring How the Character of Buildings and Blocks Influences Urban Vitality (Executive Summary)*, 2014. Report. Accessed June 2, 2016. [http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP\\_PGL\\_OlderSmallerBetter\\_ExecSummary.pdf](http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP_PGL_OlderSmallerBetter_ExecSummary.pdf).

<sup>19</sup> Preservation Green Lab. *Older, Smaller, Better: Measuring How the Character of Buildings and Blocks Influences Urban Vitality (Executive Summary)*, 2014. Report. Accessed June 2, 2016. [http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP\\_PGL\\_OlderSmallerBetter\\_ExecSummary.pdf](http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP_PGL_OlderSmallerBetter_ExecSummary.pdf).

of buildings and blocks, and a diverse range of economic, social, and environmental outcomes. Its simplified step-by-step methodology and analysis are as follows:

1. Collected data from city, county, state, and federal governmental departments and agencies, as well as publicly accessible private websites.
2. Overlaid 200-meter-by-200-meter grid over the base maps of Seattle, San Francisco, and Washington, D.C.
3. Matched and fitted source data to grid squares.
4. Excluded squares that are not in mixed-use and commercial areas.
5. Developed a “Character Score” composite measure that combined select building characteristics (building age, diversity of building age, and building granularity) into a single independent variable.
6. Developed and ran statistical models to test the relationships between building characteristics and 40 economic, social, cultural, and environmental outcome measures.<sup>20</sup>

In accordance with research objectives, four groups of indexes were identified for measures in this research:

- Building age: the median age of all primary buildings in each grid square
- Diversity of building age: the standard deviation of building ages within each grid square

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<sup>20</sup> Preservation Green Lab. *Older, Smaller, Better: Measuring How the Character of Buildings and Blocks Influences Urban Vitality*, 2014. Report. Accessed June 2, 2016. [http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP\\_PGL\\_OlderSmallerBetter\\_ReportOnly.pdf](http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP_PGL_OlderSmallerBetter_ReportOnly.pdf).

- Granularity: the number of parcels in a grid square (for Washington, D.C. and San Francisco); the number of parcels in each grid square (for Seattle)
- Urban vitality: 40 measures of activity ranging from counts of jobs and businesses to measures of population density and diversity.

For each grid square, “building age” and “diversity of building age” represented its performance on “older”, “granularity” measured its extent of “smaller”, and “urban vitality” reflected its general economic, social and cultural vitality. Then, spatial statistical analysis on these indexes helped researchers understand relationships between “older”, “smaller” (buildings) and “better” (vitality), and finally get their conclusion.

The outcome of this report included respective findings from three cities, and some general conclusions. Here are some findings from Seattle. With spatial statistics as backup, this report claimed that Seattle’s blocks of older, smaller, mixed-vintage buildings make up many of the city’s most socially, culturally and economically vibrant neighborhoods. For example, high Character Score (older, smaller) was significantly associated with greater activity of new businesses, women and minority-owned businesses, and non-chain businesses. Several graphics were generated to demonstrate these findings like Character Score, Seattle (Figure 2-1) and Business per commercial square foot by character score, Seattle (Figure 2-2 ).

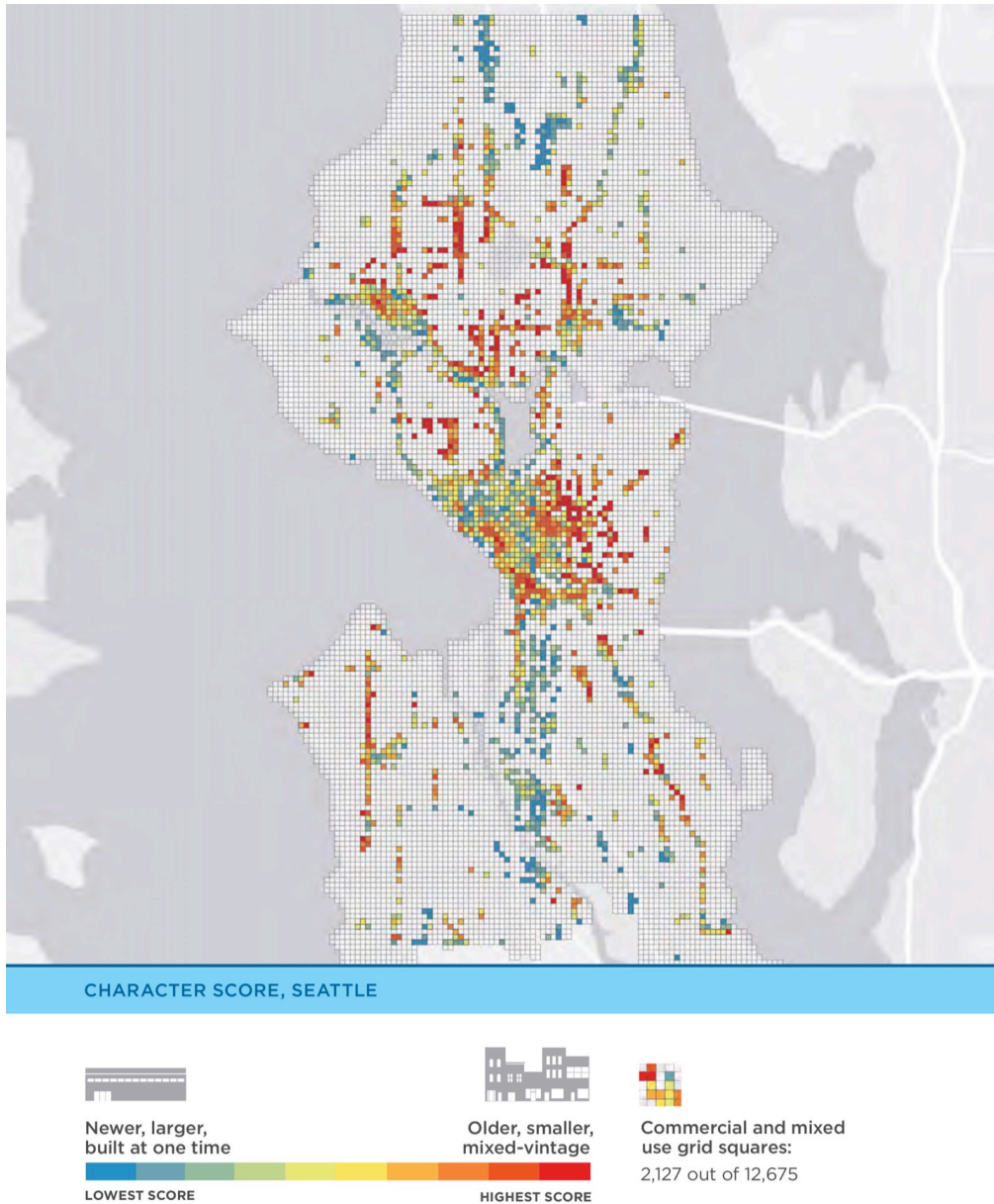
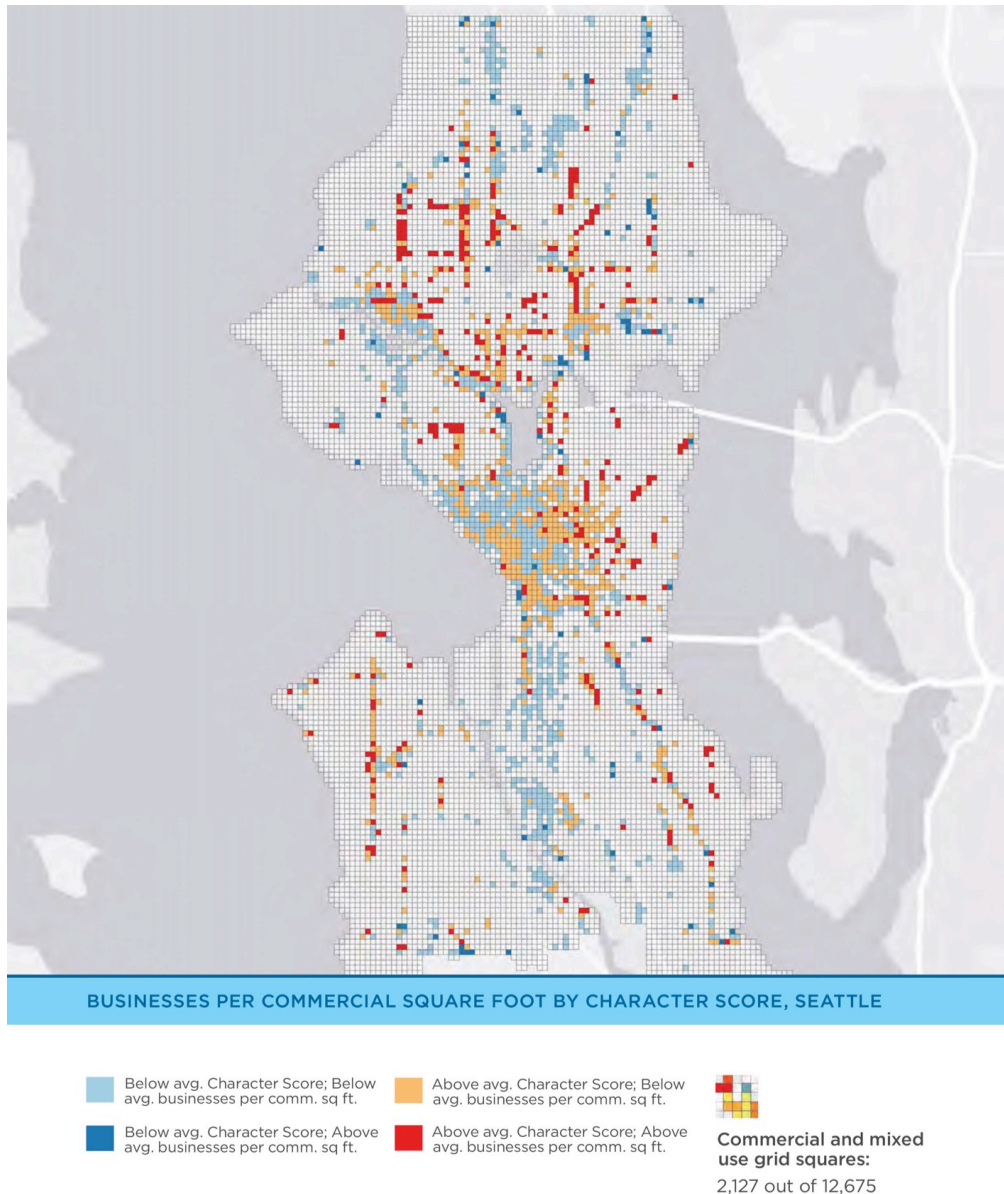


Figure 2-1 Character Score, Seattle<sup>21</sup>

<sup>21</sup> Preservation Green Lab. *Older, Smaller, Better: Measuring How the Character of Buildings and Blocks Influences Urban Vitality, 2014*. Report. Accessed June 2, 2016. [http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP\\_PGL\\_OlderSmallerBetter\\_ReportOnly.pdf](http://www.preservationnation.org/information-center/sustainable-communities/green-lab/oldersmallerbetter/report/NTHP_PGL_OlderSmallerBetter_ReportOnly.pdf).



**Figure 2-2 Business per commercial square foot by character score, Seattle<sup>22</sup>**

This report also conducted detailed analysis on Pike/Pine corridor as its neighborhood case study (Figure 2-3). In this part, a brief history and the current condition of Pike/Pine neighborhood were first introduced. Then, the Pike/Pine corridor was compared with Seattle overall on a range of performance measures, and it performed better than Seattle’s

<sup>22</sup> Preservation Green Lab. *Older, Smaller, Better: Measuring How the Character of Buildings and Blocks Influences Urban Vitality*, 2014. Report. Accessed June 2, 2016.

average on many measures, such as average cellphone activity at 10:00 p.m. on Friday night, Walk Score rating, and jobs per square foot of commercial space.

Generally speaking, this report provided researchers a comprehensive approach on studying urban character with quantitative methods, especially in the aspects of step-by-step methodologies and indexes for analysis. Its findings were also persuasive and supported previous research on the contributions of older, smaller buildings to better urban vitality. These findings are convincing references and background for future urban planning, policies and regulations. But another question is raised here- what is the rationale behind these findings, or in other words, how can we further explain “older, smaller” buildings’ contributions to “better” urban vitality. This report did not give answers on this question, which is actually limited by the quantitative methodology itself.

This thesis also includes literature review on qualitative method for assessing neighborhood character, because its typology and ground-truth approaches are helpful to explain outcomes in quantitative analysis.

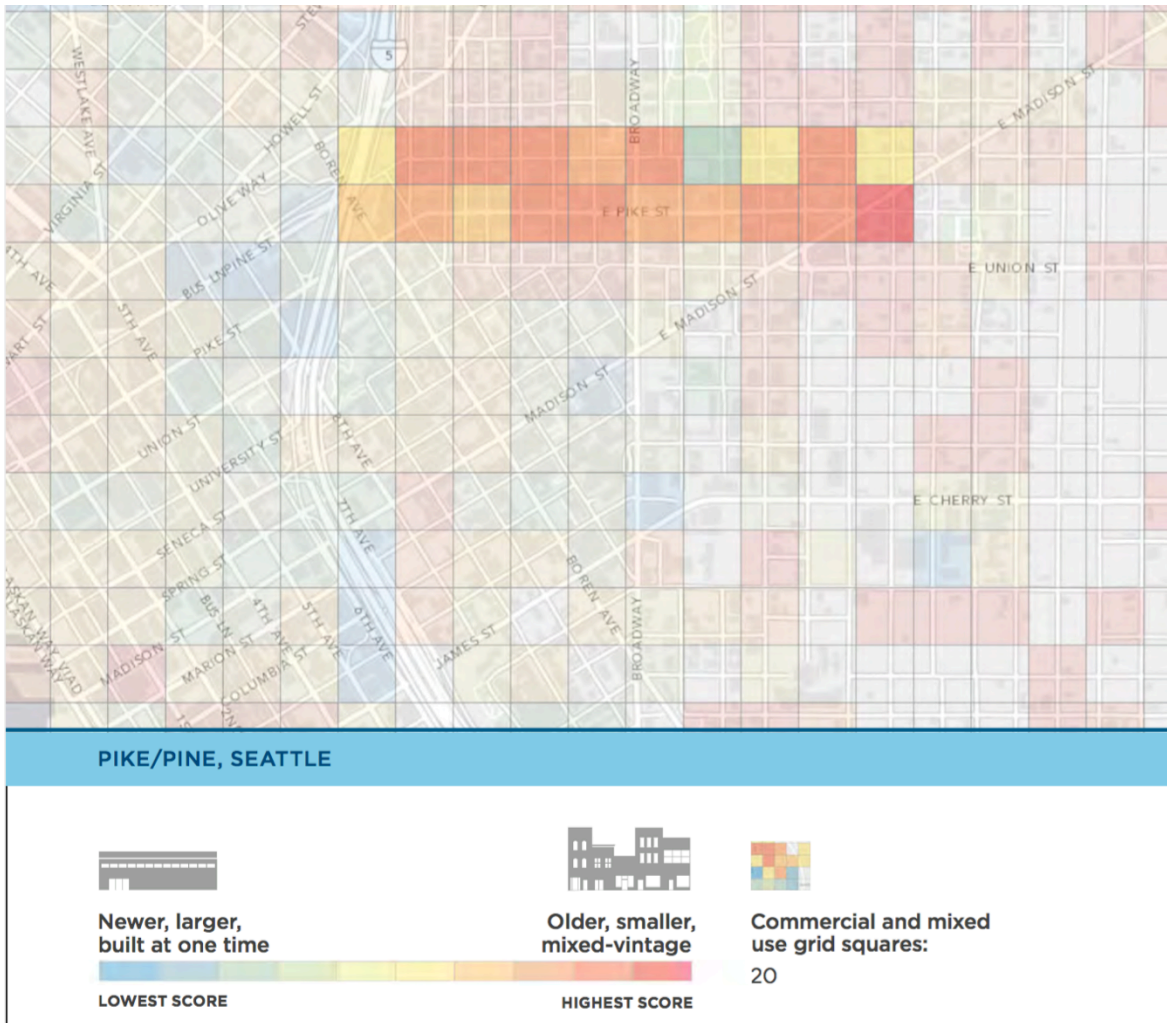


Figure 2-3 Commercial and Mixed Use Grid Squares, Pike/Pine, Seattle

### 2.3 Methods of Research- Assessing Conditions of Neighborhood Character

In terms of qualitative assessment, Rossi touched upon many of the issues that were valuable to this thesis, and provided good references in subject of building typology.<sup>23</sup> Lynch and Rapoport helped me understand relationships between physical and intangible components of built environment.<sup>24</sup> The book “Built for Change, Neighborhood Architecture in San Francisco” (“built for change”) by Anne Vernez Moudon was taken as a

<sup>23</sup> Rossi, Aldo, and Peter Eisenman. *The architecture of the city*. Cambridge, MA: mit Press, 1982.

<sup>24</sup> Lynch, Kevin, and Lloyd Rodwin. "A theory of urban form." *Journal of the American institute of planners* 24, no. 4 (1958): 201-214. Rapoport, Amos. *The meaning of the built environment: A nonverbal communication approach*. University of Arizona Press, 1982.

major reference for assessing neighborhood character with qualitative methodology. The goal of this book was to understand and explain residential design and building traditions over the course of a century of development. Its research area included sixty blocks around Alamo Square, an area near the center of San Francisco.<sup>25</sup>

There were two reasons for choosing this book. First, qualitative methods were widely used at different scale levels (neighborhood, block and architecture level) in this book, and some of its analyses were also appropriate for Pike/Pine neighborhood. Second, this book studied “change” in the architecture of Alamo Square between two periods of time (nineteenth century and twentieth century), and some of its focus points could also inspire my thesis’ study on the Pike/Pine neighborhood.

There were four parts in “built for change”: Part One: Genesis and Evolution; Part Two: Design and Building Traditions in the Nineteenth Century; Part Three: Changing Traditions in the Twentieth Century; and Part Four: Lessons in City and Building Design. What was most useful to this thesis was how building traditions were described and explained in Part Two and Three, and lessons from this study in Part Four.

This book studied building traditions from two perspectives: elements of order and elements of variety. They are further expanded into following aspects.

Elements of order:

- Land subdivision: the character and principal of land subdivision
- House design: the prototype, typology (relationship with lot, height, number of dwellings within the form) and house plan

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<sup>25</sup> Moudon, Anne Vernez. *Built for change: neighborhood architecture in San Francisco*. Mit Press, 1986.

- Public and private facades: difference of public and private facades and internal order of public facades
- The settlers' option: Settler's options in house design within the elements of order

Elements of variety:

- Natural environment: effects of topography on buildings
- Limited prescriptions: limitations and elasticity of regulations
- Traditions are not laws: the powerlessness of traditions and design guidelines

In twentieth century, the "1920s tradition" was characterized by new types of apartment buildings and by the consolidation of existing small urban lots. The "1960s tradition" included modern building forms and the very large lots typical of urban renewal.<sup>26</sup> The book's study on changes in the twentieth century was focused on elements that were different from those in nineteenth century or those first emerged, like

- Changes in subdivision of land: changes in lot size and significance of these trends:
- New collective housing forms: typology (location, dwelling organization, building organization, etc.) of apartment buildings at different periods of time
- Public and private facades: typical facades at different periods of time
- Building bases: typical building bases at different periods of time

It is worth mentioning that the outcome of this book fitted the needs of the Department of City Planning and the community in San Francisco, as they helped to consolidate a new residential zoning code. It provided the data, analysis, and rationale for identifying the historical patterns that must be reinforced and continued by new development.<sup>27</sup> This is

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<sup>26</sup> Moudon, Anne Vernez. *Built for change: neighborhood architecture in San Francisco*. Mit Press, 1986.

<sup>27</sup> Moudon, Anne Vernez. *Built for change: neighborhood architecture in San Francisco*. Mit Press, 1986.

similar to the goal of my thesis, which is to identify and promote Pike/Pine neighborhood character, and provide references for future policies and regulations. Therefore, the methodology and rationale in “built for change” is quite valuable for the Pike/Pine neighborhood.

Besides the methodology itself, two lessons from this book also inspired my thinking on Pike/Pine neighborhood, and they are “the incremental nature of change” and “meeting the unexpected: breathing spaces and resilience”.

In this study, we saw that when a new tradition emerged, it infiltrated the existing environment in an incremental fashion, with more or less impact on existing context. As a result, the physical environment today can be represented as a collage of different structures in which the various elements – the building forms, lot sizes, etc. – from the different traditions coexist.<sup>28</sup> Then, questions for planners are to research the “new tradition”, and how to manage its coexistence with the existing context. In this process, planners also need to know about building design, since most neighborhoods are gradually changed through small activities repeatedly happened at building scale.

During the development of any city, changing circumstances demand a physical environment responsive to conditions that have not been, and usually cannot be expected.<sup>29</sup> It requires us to take breathing space and resilience into consideration from city scale to architecture scale. For existing neighborhoods and buildings, we might think about how to reuse them for new conditions, and for new constructions, we could leave enough breathing space for future planning and development.

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<sup>28</sup> Moudon, Anne Vernez. *Built for change: neighborhood architecture in San Francisco*. Mit Press, 1986.

<sup>29</sup> Moudon, Anne Vernez. *Built for change: neighborhood architecture in San Francisco*. Mit Press, 1986.

## 2.4 Context of the Case- Pike/Pine Neighborhood Conservation Overlay District

The Pike/Pine Conservation Overlay District (PPCOD) was established to maintain the uniqueness of the Pike/Pine neighborhood by using incentives to encourage creative ways to preserve existing buildings, support small businesses and preserve neighborhood character.<sup>30</sup> The PPCOD that we see today has experienced four phases of updates since it was first established in 1995, and they are:

### **Phase 1: Overlay Establishment and Up-Zoning**

In Feb 2015, Pike/Pine Overlay District was established to respond to the City of Seattle's Urban Center Village Strategy. Its purposed was to enhance the area's residential and commercial mixed-use character, and differentiate it from high-density commercial and institutional development in Seattle's downtown core. Its main policy change was setting overlay zoning and replacing Commercial 2 (C2: auto-oriented commercial) zoning to Neighborhood Commercial 3 (NC3: pedestrian-oriented mixed use shopping district) that allowed higher and denser residential developments with street level retail and less parking requirements.

In Nov 1998, the Urban Center Village Plan affirmed the fundamental strategies for this area proposed with the overlay establishment.

### **Phase 2: Overlay Expansion and Design Guideline Adaption**

In Aug 2009, the Pike/Pine Overlay District was expanded and renamed to "Pike/Pine Conservation Overlay District" (PPCOD), in order to deal with the rapid increase of denser

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<sup>30</sup> Office of Planning & Community Development. "Pike/Pine Conservation District." Seattle.gov. <http://www.seattle.gov/dpd/cityplanning/completeprojectslist/pikepine/whatwhy/default.htm> (assessed April 24th, 2016)

developments and encourage new developments to fit into the neighborhood character.

Major policy changes included

- Expanded Overlay and changed remaining C2 zoning to NC3
- Rezoned NC3 to NC3P: Pedestrian Designation
- Designated E. Pike Street and E. Pine Street as principal pedestrian streets, as well as segments of 10<sup>th</sup>, 12<sup>th</sup>, and 13<sup>th</sup> Avenues east of Broadway and north of Pike Street

In Oct 2010, new Design Guidelines were established to provide incentives through exemptions from floor area calculations and/or limits on non-residential use to projects that:

- Retain existing character structures in new development lots
- Encourage development on small lots with 8,000 square feet or less
- Include space for small commercial uses at the street level of structures
- Include arts facilities and theaters in existing structures

### **Phase 3: Transfer of Development Potential (TDP) Program Adaption**

In Jan 2010, Transfer of Development Potential Program was adopted with following rules:

- Designate area within Conservation Core as sending area and other NC3P-65' zone as receiving area
- The owner of a sending site was required to maintain character structures for at least 50 years
- On receiving sites, an additional 10' was allowed above the current 65' height limit
- No maximum width and depth limits were applied to receiving sites
- Transferred rights must be used for housing

- Within Conservation Core, new limits on structure width and depth would apply

#### **Phase 4: Amendments to Discourage Larger Lot Developments**

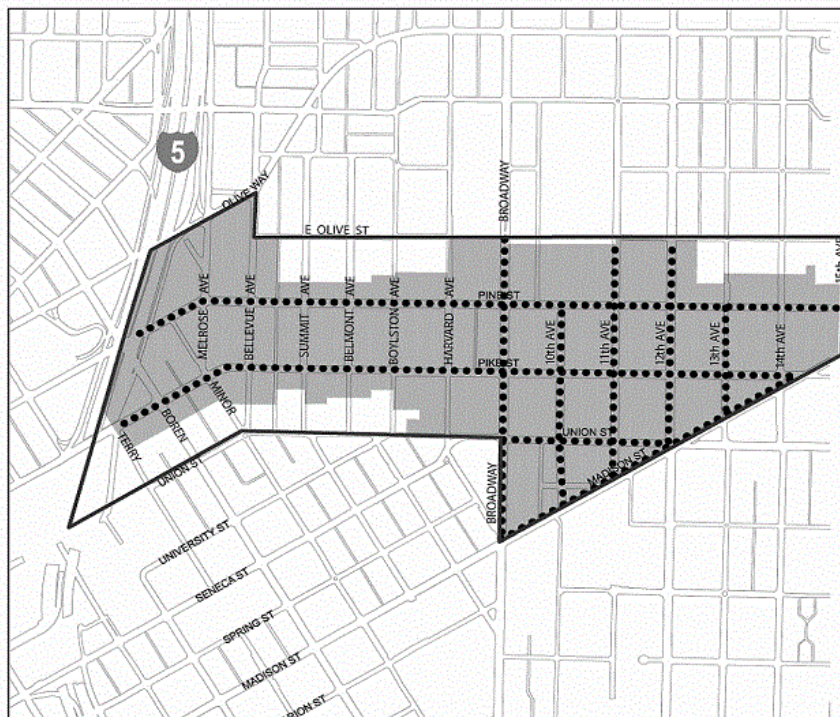
In June 2014, PPCOD ordinances were amended to deal with increasing numbers of large lot developments, and it required that all character structures on a lot be partially retained when zoning incentives are used, and give the Design Review Board the flexibility to grant departures from this requirement with guidance from proposed new criteria in the code. It also reduced the bulk of buildings on large lots by further limiting the amount of floor area that can be built above a height of 35 feet.<sup>31</sup> Boundary of the PPCOD is shown in Figure 2-4 Boundary of PPCOD, and Conservation Core (see Figure 2-5) in the PPCOD is established to better conserve character structure in this neighborhood.

The development of PPCOD ordinances reflected changes in people's attitude towards Pike/Pine neighborhood character. In Phase 1, the basic framework of Pike/Pine neighborhood character was set up through establishment of overlay district and Up-Zoning. In Phase 2, ordinances and design guidelines were adapted to conserve existing characteristic architecture styles and also refine neighborhood character. In Phase 3 and Phase 4, new ordinances and especially TDR was amended to appropriately guide new developments happening in this neighborhood. These changes further strengthen the significance and necessity of this thesis, which could help guide new changes and developments in the future.

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<sup>31</sup> Chalana, Manish (ed.). *Studio Report: URBDP 508 Urban Design & Preservation Specialty Studio - Autumn 2015*. Unpublished Report, 2015. Office of Planning and Community Development. "Pike/Pine Conservation District." Seattle.GOV. Accessed May 22, 2016.  
<http://www.seattle.gov/dpd/cityplanning/completenesslist/pikepines/background/default.htm>.

Another question of previous PPCOD ordinances is that even though they touched upon both physical and intangible neighborhood character, they did not effectively conserve those intangible characteristics, like small businesses and diverse community. This thesis tries to fill in this gap by comprehensively studying Pike/Pine neighborhood characteristics, including both physical and intangible elements.



**Map A for 23.73.008  
Uses at Street Level**

- Pike/Pine Conservation Overlay District
- Pike/Pine Urban Village
- Principal Pedestrian Street

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Figure 2-4 Boundary of PPCOD<sup>32</sup>

<sup>32</sup> Office of the City Clerk. "City of Seattle Legislative Information Service (Council Bill Number: 118096; Ordinance Number: 124503)". Seattle.gov. Accessed May 22, 2016. <http://clerk.seattle.gov/~scripts/nph-brs.exe?s3=&s4=124503&s5=&s1=&s2=&S6=&Sect4=AND&l=0&Sect2=THESON&Sect3=PLURON&Sect5=CBORY&Sect6=HITOFF&d=ORDF&p=1&u=%2F~public%2Fchor1.htm&r=1&f=G>



Figure 2-5 Boundary of PPCOD core area<sup>33</sup>

<sup>33</sup> Office of the City Clerk. "City of Seattle Legislative Information Service (Council Bill Number: 118096; Ordinance Number: 124503)". Seattle.gov. Accessed May 22, 2016. <http://clerk.seattle.gov/~scripts/nph-brs.exe?s3=&s4=124503&s5=&s1=&s2=&S6=&Sect4=AND&l=0&Sect2=THESON&Sect3=PLURON&Sect5=CBORY&Sect6=HITOFF&d=ORDF&p=1&u=%2F~public%2Fchor1.htm&r=1&f=G>

## 2.5 Context of the Case- Seattle Comprehensive Plan

In the City of Seattle Comprehensive Plan (2005), there were two parts directly related to the Pike/Pine neighborhood: an Urban Village Element and a Neighborhood Element. They indicated the potential for and possibilities of future development in the Pike/Pine neighborhood, especially considering the inclination of investments and relevant policies.

In the Urban Village Element, urban centers are defined as the densest neighborhoods in the city and are both regional centers and neighborhoods that provide a diverse mix of uses, housing and employment opportunities.<sup>34</sup> Pike/Pine neighborhood as an Urban Center Village is part of the First Hill/ Capitol Hill urban center, and its functional designation is mixed neighborhood, with a residential emphasis.

In the Neighborhood Element, Pike/Pine neighborhood's community character goal is a community with its own distinct identity comprised of a mix of uses including multi-family residential, small scale retail businesses, light manufacturing, auto row and local institutions.<sup>35</sup> Other goals and corresponding policies are also mentioned in this part, like economic development, housing, and urban design. Lively daytime and nighttime activities, residential density, active pedestrian environment and reliable transit are especially emphasized in this part.

Generally speaking, City of Seattle Comprehensive Plan indicated two aspects on future developments in the Pike/Pine neighborhood. First, this neighborhood as part of an Urban Center is supposed to accommodate future growth in jobs and residents. Second, this

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<sup>34</sup> City of Seattle, Department of Planning and Development. *City of Seattle Comprehensive Plan, 2005.*

<sup>35</sup> City of Seattle, Department of Planning and Development. *City of Seattle Comprehensive Plan, 2005.*

neighborhood has great developing potential to strengthen its distinct identity and construct more residential buildings.

## 3 Methodology

### 3.1 Measuring Distributions of Neighborhood Character

#### 3.1.1 Data Collection and Analysis

In order to measure the distribution of Pike/Pine neighborhood character, this thesis assembles disparate datasets and analyses these data with statistical methods. Instead of using 200-meter-by-200-meter grid like “older, smaller, better”, census block was chosen as the basic unit for analysis in this study, so that the outcomes could be more accurate in location. Step by step descriptions of the methodology are following:

- Step 1: Collect data from different sources

This research began by seeking out desired data to include in this research, and there were twelve indicators in total selected for measuring Pike/Pine neighborhood character. Then, these data were searched in open data portals, like King County Tax Assessor and U.S. Census. For those data that were not available online, they were either replaced by similar data or manually edited.

- Step 2: Match and fit source data to census blocks

Because the data used in this study were saved in different formats, like .shp and .dbf, in step 1, I first matched and connected them with geo-location in ArcGIS. Then each piece of data was fitted and reassigned to census blocks. In this process, the original data at a

smaller scale was either averaged or aggregated to fit into census blocks. For example, building age at parcel level was averaged to get average building age in each census block. For aggregated data, they are further normalized by size of census block. (See 3.1.2 for detailed information about indicators of neighborhood characteristics)

- Step 3: Develop indexes of neighborhood characteristics

To measure and compare different indicators at the same level, all neighborhood character data were “z-standardized” to get indexes for those indicators. For instance, “building age” was “z-standardized” to get “Index for building age”. Z-standardization involves subtracting the average value from each score and dividing that number by the overall standard deviation of values, and producing a number that reflects the number of standard deviations above or below the neighborhood average. Then, several composite indicators were developed to represent different census blocks’ performance in general.

- Step 4: Map indexes of neighborhood characteristics

Maps were generated in ArcGIS to demonstrate the distribution of different indexes of neighborhood characteristics. Then these maps were compared with each other and with ground truth analysis.

- Step 5: Develop and run statistical models to test correlations between different indexes of neighborhood characteristics

This study employed Pearson correlation test to assess the statistical correlations between different indexes of neighborhood characteristics. This helps us understand how different neighborhood characteristics are interrelated to each other.

### 3.1.2 Indicators for Neighborhood Characteristics

It was mentioned in previous chapter that Pike/Pine neighborhood stakeholders voiced five neighborhood characteristics: architecture, uses, culture, housing and diversity. In this thesis, “uses” and “culture” were combined into one component “uses/culture”, because their measurements were very close to each other. Then, four categories of neighborhood characteristics were identified in this thesis: 1) Architecture, 2) Uses/ Culture, 3) Housing, and 4) Diversity.

Under these four categories, twelve specific indicators in total were developed to measure different census blocks’ performance at several specific aspects.

#### **Specific Indicators for Neighborhood Character**

Specific indicators with their units and data source are shown in Table 2 Specific Indicators for Neighborhood Character.

- **Architecture**

Architecture character in Pike/Pine neighborhood was described as “One to three stories, early twentieth-century, loft style, former automobile sales and repair, warehouses, which are frequently made with brick and concrete, extensive glazing. New architecture is high-quality and harmonious.”<sup>36</sup> At census block level, three indicators were developed to measure it in a quantitative way.

- 1) Building stories: average building stories in each census block
- 2) Building age: average building age in each census block
- 3) Building material: number of buildings made with concrete or masonry/ square feet of census block

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<sup>36</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.  
[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

- **Uses/Culture**

The stakeholders' description on uses was "local, unique, independent and small-scale retail; small-scale commercial and office space; work and performance space for artists; residential; nightclubs, bars, restaurants and cafés; some gay-specific businesses, bars, and services; education and training; and some remaining auto-oriented businesses. "Gritty and authentic" are used to describe this neighborhood."<sup>37</sup> Their key words on culture were "nightlife and restaurants, gallery and performing spaces; diverse — gay culture, bohemian or alternative, youth and students. Importance of street activity and liveliness."<sup>38</sup> Another three indicators were established to represent main characteristics of uses/culture in census blocks.

- 1) Retail, commercial and office: Number of retail, commercial and office / square feet of census block
- 2) Art and performance space: Number of art and performance space/ square feet of census block
- 3) Bars, restaurants and cafes: Number of bars, restaurants and cafes / square feet of census block

- **Housing**

"Over 90% renters with several hundred subsidized housing units"<sup>39</sup> is how the stakeholders described the housing character in Pike/Pine. Three indicators were used here to demonstrate housing character in the Pike/Pine neighborhood. Subsidized housing

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<sup>37</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

<sup>38</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

<sup>39</sup> Pike/Pine Neighborhood Conservation Study. 2008. Ebook. 1st ed. Seattle.

[http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd016691.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016691.pdf).

units were not included in this analysis because credible data about subsidized housing was not available.

- 1) Housing Size: average housing size in census block
- 2) Rental Ratio: units for rent (apartment units)/ total housing units (apartment units+ condo units + residential units)
- 3) Housing Units: number of housing units/ square feet of census block

- **Diversity**

Described as: “A neighborhood that residents value and show their interest by being active in neighborhood issues. There is a diversity of people with respect to ages, incomes, appearance, and sexual orientation.”<sup>40</sup> To represent neighborhood diversity, these three indicators were used:

- 1) Age Diversity: Standard deviation calculated using proportions of population from the following age groups: 0-17, 18-34, 35-49, 50-64, 65+.
- 2) Race Diversity: Standard deviation calculated using proportions of population from the following race and ethnic groups: Non-Hispanic white, Non-Hispanic African-American, Non-Hispanic Asian, Hispanic, all other races and ethnicities.
- 3) Income Diversity: Standard deviation calculated using proportions of lower-income (\$35,000 – 99,999), and upper-income groups (\$100,000+)

Looking at these specific indicators above, I found that they could not be compared or combined at the same scale level because of their diversified units. Therefore, as mentioned before, all indicators were “z-standardized” to get indexes with the same measurements. For most indicators, a higher number represents a more positive influence on

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<sup>40</sup> Lund Consulting, Inc, Pike/Pine Neighborhood Conservation Study, 2008

neighborhood character. For housing units, for example, their “z-standardized” score is directly used as an index. However, for those indicators in which a higher index value means more negative impact on neighborhood character, like building stories, I used the negative value of their “z-standardized” score as an index. As a result higher overall index numbers represent better neighborhood character. Those indicators with negative “z-standardized” scores are labeled with “\*” in Table 2 Specific Indicators for Neighborhood Character.

**Table 2 Specific Indicators for Neighborhood Character**

<b>Categories of Neighborhood Characteristics</b>	<b>Indicator</b>	<b>Units</b>	<b>Data Source</b>
Architecture	Building stories*	Stories	King County Tax Assessor (Tax Assessor)
	Building age	Years	Tax Assessor
	Building Material	Number / sqft	Tax Assessor
Uses/ Culture	Retail, commercial and office	Number/ sqft	(Manual input based on Google Map)
	Art work and performance space	Number/ sqft	(Manual input based on Google Map)
	Bars, restaurants and cafes	Number/ sqft	(Manual input based on Google Map)
Housing	Housing Size*	Sqft	Tax Assessor
	Rental Ratio	Ratio	Tax Assessor
	Housing Units	Number/ sqft	Tax Assessor
Diversity	Age Diversity	Standard deviation	U.S. Census
	Racial Diversity	Standard deviation	U.S. Census
	Income Diversity	Standard deviation	U.S. Census

\* Indicators that negative “z-standardized” scores were used as indexes.

### **Composite Indicators for Neighborhood Character**

Then, different specific indexes were aggregated to get four new indexes, which were composite indicators reflecting each block's general performances in four categories: architecture, uses/culture, housing and diversity.

- Index for Architecture Character = index for building stories + index for building age + index for building material
- Index for Uses/Culture Character = index for retail, office and commercial + index for art work and performance space + index for bars, restaurants and cafes
- Index for Housing Character = index for housing size + index for rental ratio + index for housing units
- Index for Diversity Character = index for age diversity + index for racial diversity + index for income diversity

Finally, these four composite indexes were further aggregated respectively to get another two composite indexes:

- Index for Visiting the neighborhood = index for architecture character + index for uses/culture character
- Index for Living in the neighborhood = index for housing character + index for uses/culture character

These two indexes indicate people's perception of Pike/Pine neighborhood from superficial to deep on a chronological sequence. When visiting this neighborhood, people would first perceive the most superficial characteristics- architecture and uses/culture. If choosing to live in that neighborhood, they would gradually perceive the deeper characteristics- housing and diversity. This classification helps distinguish basic features of different neighborhood characteristics, and how they influence people's perception and behavior.

## 3.2 Assessing Conditions of Neighborhood Character

Measuring distributions of neighborhood characters gives us an intuitive snapshot of different areas' general performance in Pike/Pine neighborhood. But on the other hand, we need further research to understand how specific neighborhood characteristics are embodied on the ground, and what their strengths and weaknesses are. As a result, with the reference of "built for change", a qualitative assessment was implemented for grounding truth on site, and it was conducted at two scale levels: neighborhood scale and block scale.

### 3.2.1 Assessment at Neighborhood Scale

At this scale, typology analysis was used to categorize and describe different neighborhood characteristics. In this process, two physical characteristics- architecture and housing were classified into several categories first, and then their relationships to intangible components- use/culture and diversity were described respectively. This qualitative assessment tried to bridge physical and intangible elements of neighborhood character, so that they can be improved together in future.

There were four categories of architecture typology - "old building", "rehabilitated old building", "old façade new building" and "new building", and they were identified based on building age, façade, construction and etc. Based on these four categories, different building's influences on use/culture were further assessed.

For housing, three categories of typology were identified based on their capacity to accommodate people: single-family housing, condominium and apartment. Because

different types of housing were different in unit size, property type, number of units per building, etc., they were further analyzed on their effects to neighborhood diversity.

### **3.2.2 Assessment at Block Scale**

With the outcome of “measuring distributions of neighborhood character” and “assessment at neighborhood scale” in mind, three representative blocks were selected to explore how specific blocks and buildings embody different neighborhood characteristics. These three blocks were chosen mainly based on their indexes on “visiting the neighborhood” and “living in the neighborhood”. Among these three blocks, one got the highest index on “visiting the neighborhood”, and the other two had very high indexes on “living in the neighborhood”.

For each block, I first generally assessed its location, land use, typology (architecture and housing typology), built form (stories, gross square feet), and use (number of housing units and number of business units), which helped to delineate this block’s profile and explain its outstanding performance on quantitative measurement. Then, I picked up several parcels for detailed analysis from two aspects: lessons learned from them and their missed opportunities. By assessment at block scale, I wanted to study the Pike/Pine Neighborhood character in detail to understand both its success and potential, which are practical references for instructing this neighborhood’s future development.

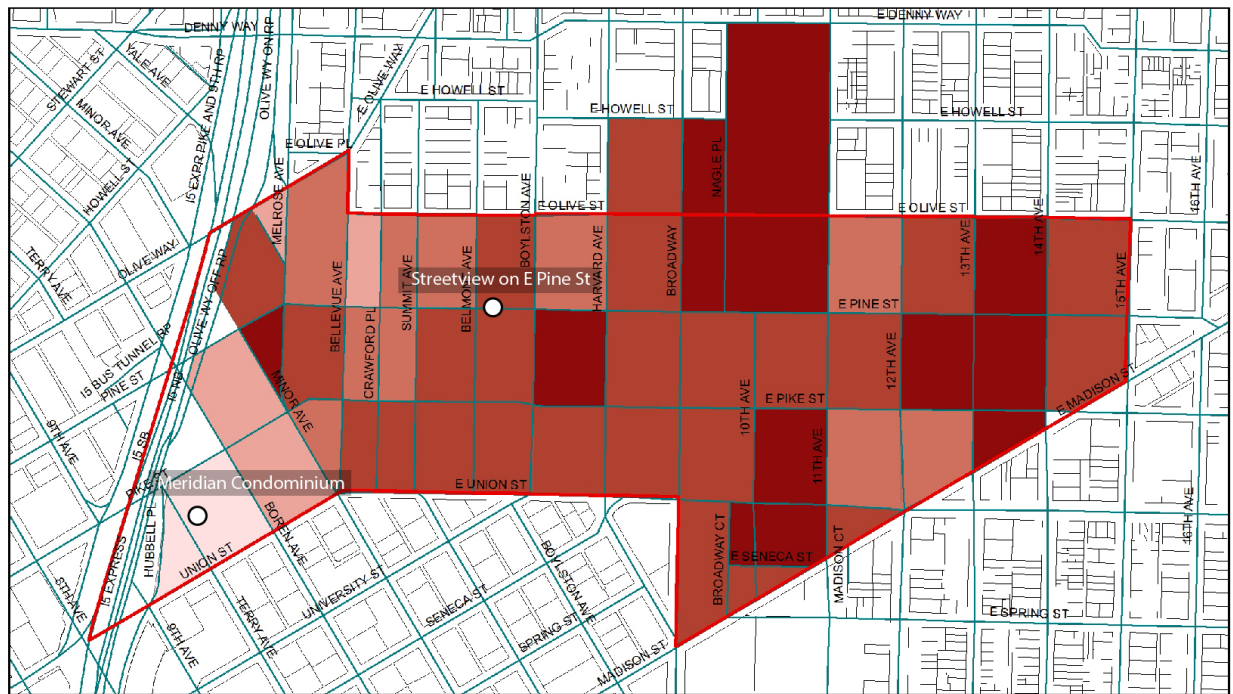
# 4 Findings

## 4.1 Measuring Distributions of Neighborhood Character

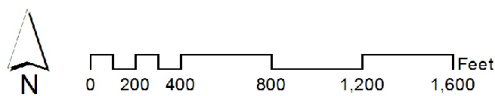
In this part, findings are discussed in the sequence of 1) specific indexes for neighborhood character, 2) composite indexes for neighborhood character and 3) correlation analysis. For each part, maps or statistical outcomes are described and demonstrated first, and then a ground truth analysis is used to explain these findings.

### 4.1.1 Specific Neighborhood Character

#### Architecture



**Pike/Pine Neighborhood Character Index for Building Stories**



**Legend**

- Pike/Pine
- 5.29 - -3.68 (6 - 16 Stories)
- 3.67 - -0.47 (4.1 - 5 Stories)
- 0.46 - 0.04 (2.75 - 4 Stories)
- 0.05 - 0.44 (1.76 - 2.74 Stories)
- 0.45 - 0.74 (1 - 1.75 Stories)

Figure 4-1 Index for Building Stories

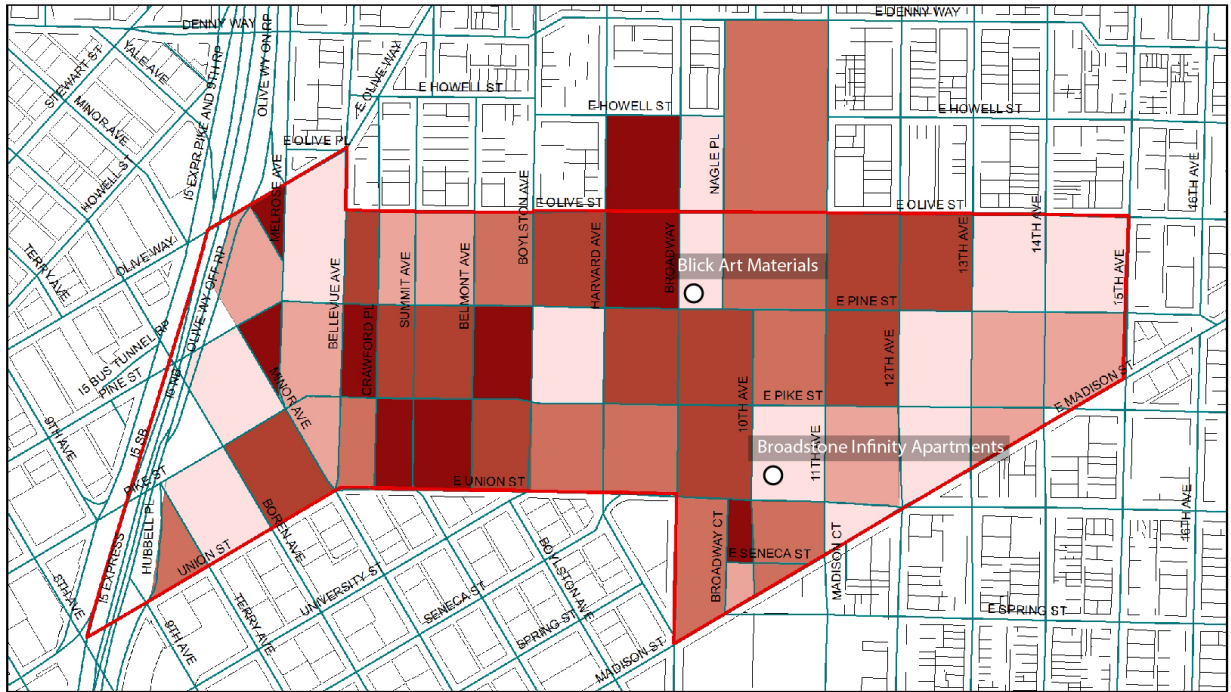


**Figure 4-2 Street View on E Pine St**

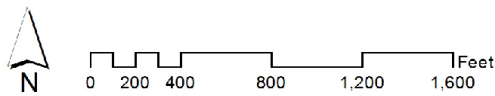


**Figure 4-3 Meridian Condominium**

Figure 4-1 demonstrates that most blocks' average building stories are below six, except for several blocks on southwest side of the neighborhood (outside of PPCOD), in which buildings are as high as sixteen stories. A direct perception of this neighborhood's building height can be found at Street View on E Pike St (Figure 4-2) typically one to three stories, and new buildings are primarily five to six stories. A representative high-rise building is the Meridian Condominium (Figure 4-3).



**Pike/Pine Neighborhood Character Index for Building Age**



**Legend**

- Pike/Pine
- 2.48 -- -1.00 (0 - 38 Year)
- 0.99 -- -0.38 (39 - 54 Year)
- 0.37 - 0.26 (55 - 70 Year)
- 0.27 - 1.08 (71 - 91 Year)
- 1.09 - 1.63 (92 - 104 Year)

**Figure 4-4 Index for Building Age**



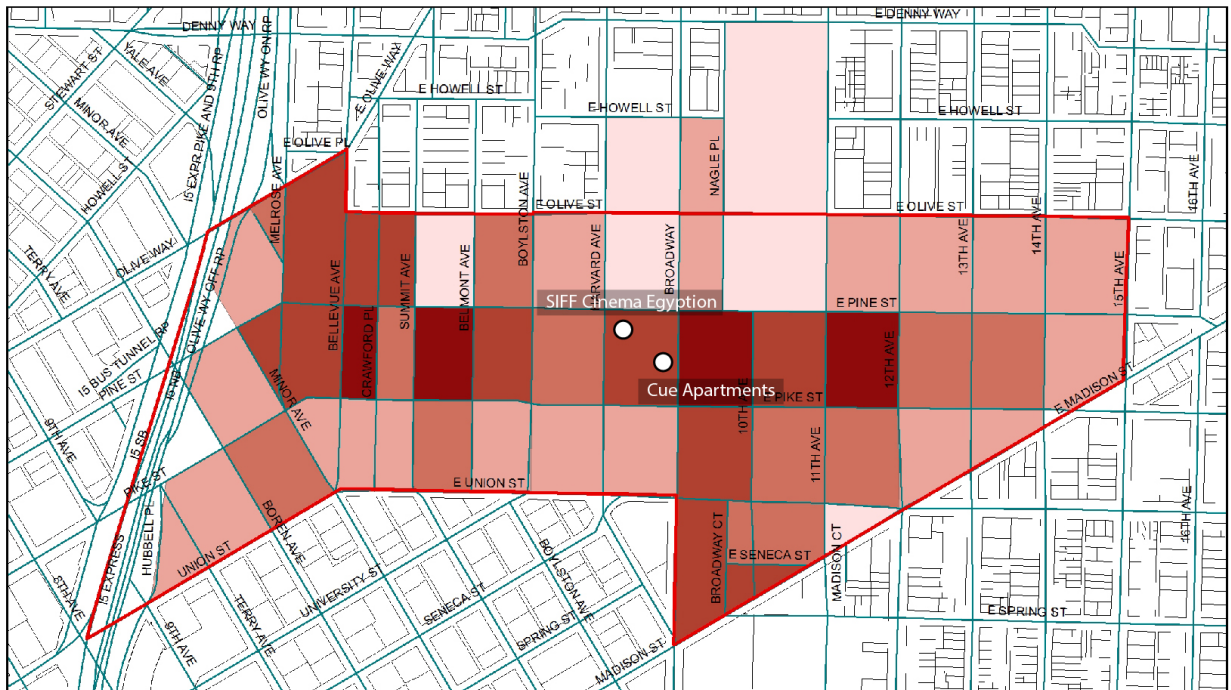
**Figure 4-5 Blick Art Materials**



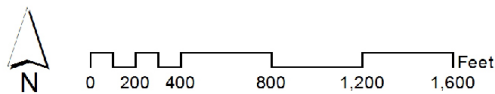
**Figure 4-6 Broadstone Infinity Apartments**

According to the map Figure 4-4 and ground truth research, “older blocks” are mainly located between Bellevue Ave and 12<sup>th</sup> Ave, and they are occupied by buildings from the

auto-row period of time, like Blick Art Materials store (see Figure 4-5). Although newer blocks accommodate newly constructed apartments or mixed-use buildings, many new developments have also conserved the façade of older buildings, like Broadstone Infinity Apartments (Figure 4-6).



**Pike/Pine Neighborhood Character Index for Building Material**



**Legend**

- Pike/Pine
- 1.77 - -1.35 (0 - 0.3 Units/Acre)
- 1.34 - -0.47 (0.31 - 1.22 Units/Acre)
- 0.46 - 0.46 (1.23 - 1.8 Units/Acre)
- 0.47 - 1.31 (1.81 - 2.42 Units/Acre)
- 1.32 - 1.98 (2.43 - 2.74 Units/Acre)

Figure 4-7 Index for Building Material

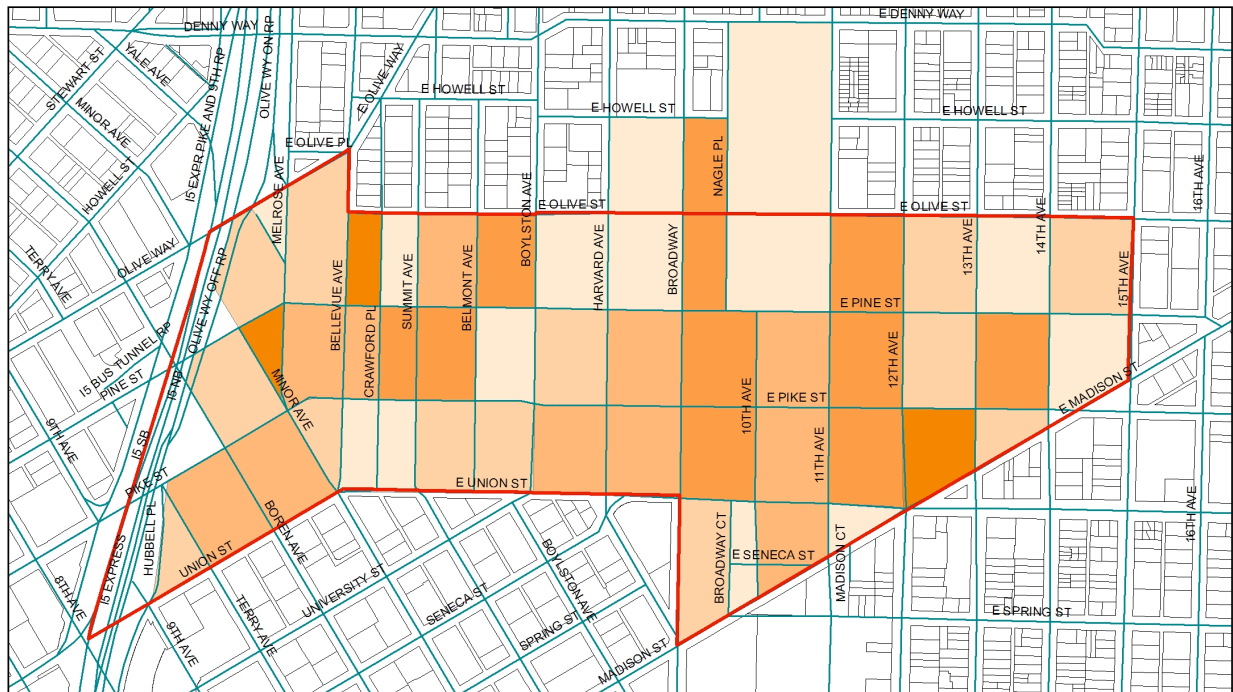


**Figure 4-8 SIFF Cinema Egyptian**

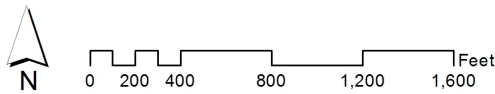
**Figure 4-9 Cue Apartments**

Figure 4-7 maps out the distribution of buildings with characteristic material (concrete and masonry) in Pike/Pine neighborhood, and they are mainly concentrated in Pike/Pine corridor and PPCOD conservation core. Most buildings with characteristic material are older buildings, like SIFF Cinema Egyptian (Figure 4-8), which reflect the architecture style and construction technology at that specific period of time. The material used in newer buildings is usually harmonious with existing neighborhood character. For some new buildings, the façade at street level uses characteristic materials (Figure 4-9 Cue Apartments).

## Uses/Culture



**Pike/Pine Neighborhood Character Index for Retail, Commercial and Office**

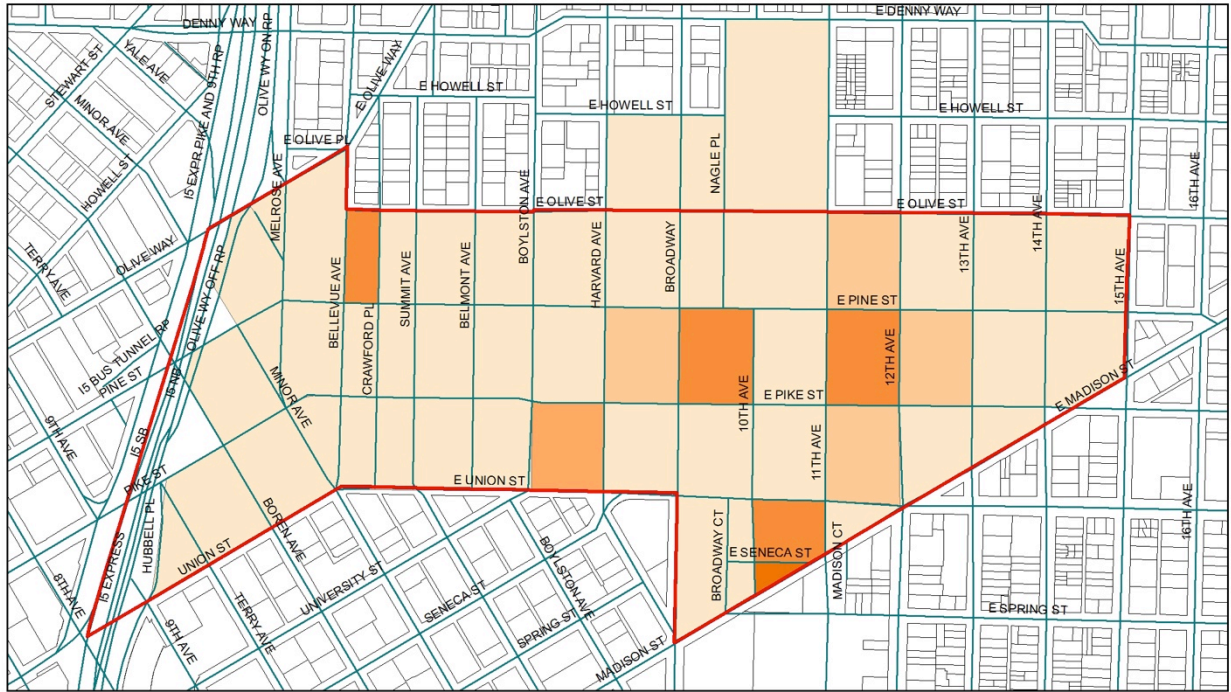


### Legend

<span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px;"></span>	Pike/Pine
<span style="background-color: #f9e79f; display: inline-block; width: 15px; height: 10px;"></span>	-1.08 - -0.84 (0 - 0.4 Units/Acre)
<span style="background-color: #f4b084; display: inline-block; width: 15px; height: 10px;"></span>	-0.83 - -0.29 (0.41 - 1.31 Units/Acre)
<span style="background-color: #e69d00; display: inline-block; width: 15px; height: 10px;"></span>	-0.28 - 0.52 (1.32 - 2.67 Units/Acre)
<span style="background-color: #d9534f; display: inline-block; width: 15px; height: 10px;"></span>	0.53 - 1.60 (2.68 - 4.49 Units/Acre)
<span style="background-color: #c43a21; display: inline-block; width: 15px; height: 10px;"></span>	1.61 - 2.67 (4.5 - 6.4 Units/Acre)

**Figure 4-10 Index for Retail, Commercial and Office**

From Figure 4-10, we can see that retail, commercial and office spaces are not evenly distributed in this neighborhood. A large number of them are congregated at blocks on northeast of the neighborhood and around Cal Anderson Park. Taking site visit into consideration, I found that most of these uses in this neighborhood are located in adaptively reused older buildings. The early auto-row buildings with large ceiling heights and structural spans give current users lots of flexibility to reorganize and divide the space.



**Pike/Pine Neighborhood Character Index for Art and Performance Space**

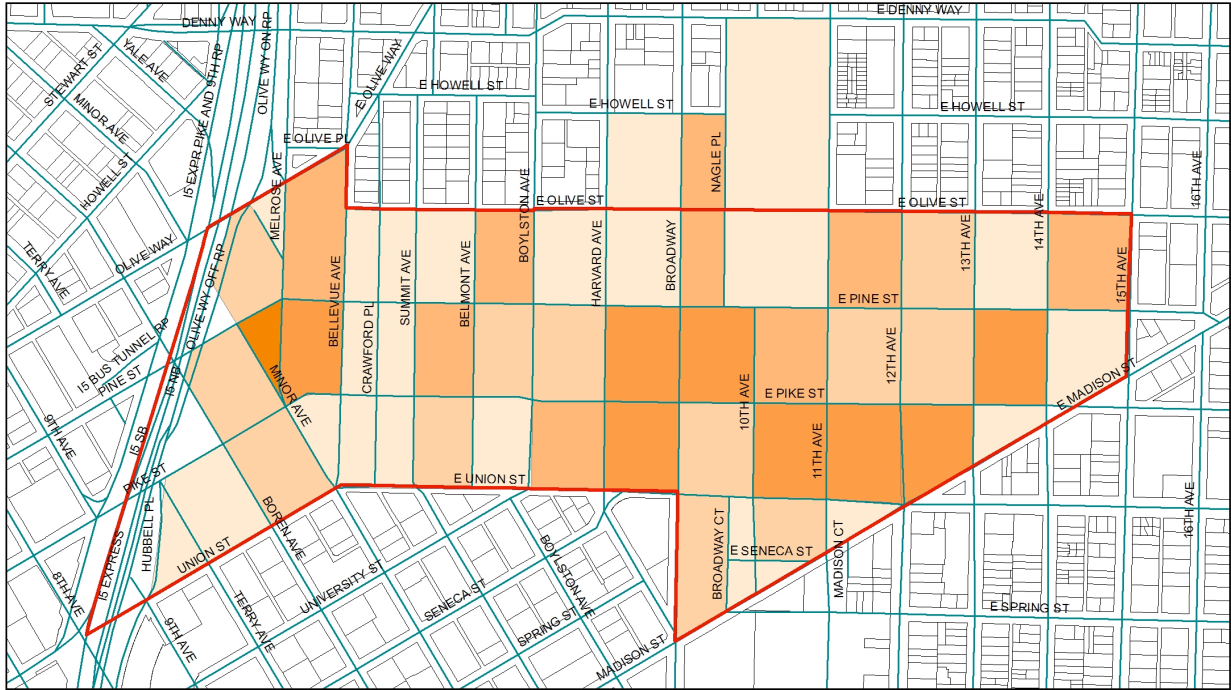


**Legend**

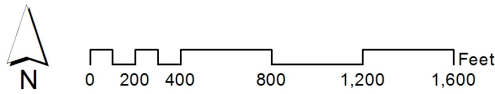
- Pike/Pine
- 0.36 (0 Units/Acre)
- 0.35 - 0.50 (0.1 - 0.31 Units/Acre)
- 0.51 - 0.58 (0.32 - 0.35 Units/Acre)
- 0.59 - 2.35 (0.36 - 0.7 Units/Acre)
- 2.36 - 5.64 (0.71 - 2.22 Units/Acre)

**Figure 4-11 Index for Art and Performance Space**

In Figure 4-11, there are only a few blocks with art and performance space. Actually, this outcome is largely limited by the methodology and criteria that were used to collect data. The data source, Google Maps, only shows formal art and performance space, like movie theaters, but overlooked large numbers of informal performance space, like performance space integrated within bars and restaurants. If we took those informal spaces into consideration, I expect there would be more art and performance spaces shown on this map.



**Pike/Pine Neighborhood Character Index for Bars, Restaurants and Cafes**



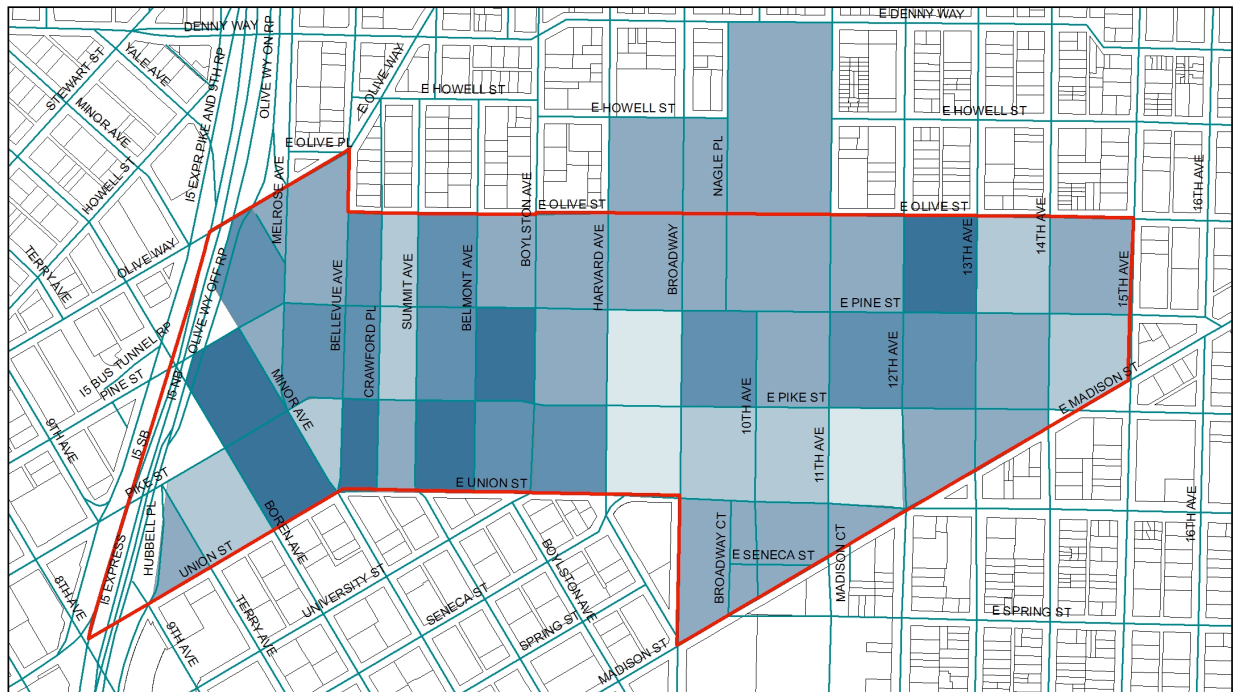
**Legend**

- Pike/Pine
- 0.59 (0 Units/Acre)
- 0.58 - -0.07 (0.1 - 0.65 Units/Acre)
- 0.06 - 0.50 (0.66 - 1.39 Units/Acre)
- 0.51 - 1.23 (1.4 - 2.33 Units/Acre)
- 1.24 - 5.80 (2.34 - 8.2 Units/Acre)

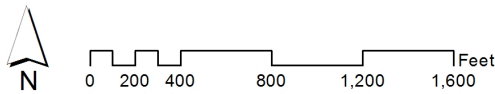
**Figure 4-12 Index for Bars, Restaurants and Cafes**

Similar to retail, commercial and office distribution, many bars, restaurants and cafes are located in blocks on the west side of the neighborhood and around Cal Anderson Park (Figure 4-12). Through site visits, I found that large numbers of bars, restaurants and cafes tend to locate themselves in adaptively reused old buildings or new development with old structures, which could further help shape these businesses' unique features.

# Housing



**Pike/Pine Neighborhood Character Index for Housing Size**

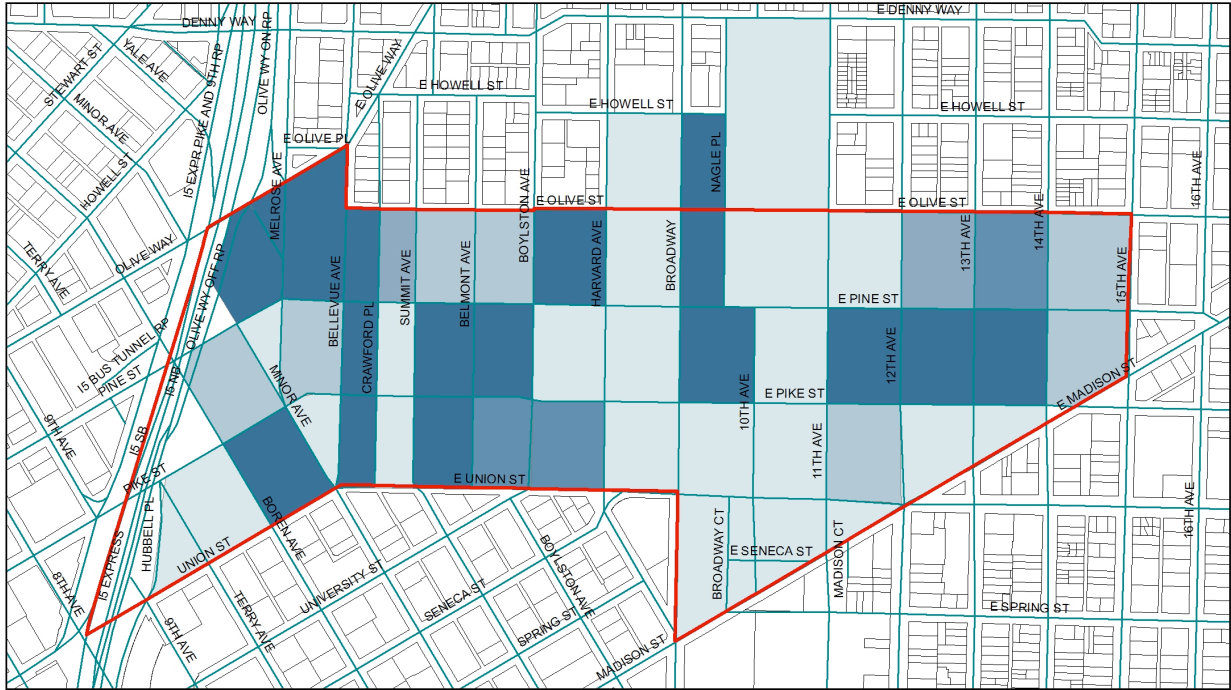


**Legend**

- Pike/Pine
- 3.30 - -2.31 (1075 - 744 Sqft)
- 2.30 - -0.42 (745 - 1074 Sqft)
- 0.41 - 0.16 (700 - 744 or 0 Sqft)
- 0.17 - 0.74 (580 - 699 Sqft)
- 0.75 - 1.70 (353 - 579 Sqft)

**Figure 4-13 Index for Housing Size**

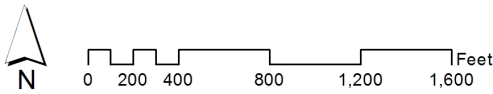
Figure 4-13 demonstrates the condition of housing size in Pike/Pine neighborhood. From this map, we can easily know that the average housing size is generally smaller on the west side of the neighborhood than that on the east side. This is due to the many older apartments and condos with small unit size located on west side, and they “pull down” the average unit size in this area. On the contrary, there are still few numbers of single-family housings on east side of the neighborhood, which “pulls up” the average unit size for those blocks.



**Pike/Pine Neighborhood Character Index for Housing Rental Ratio**

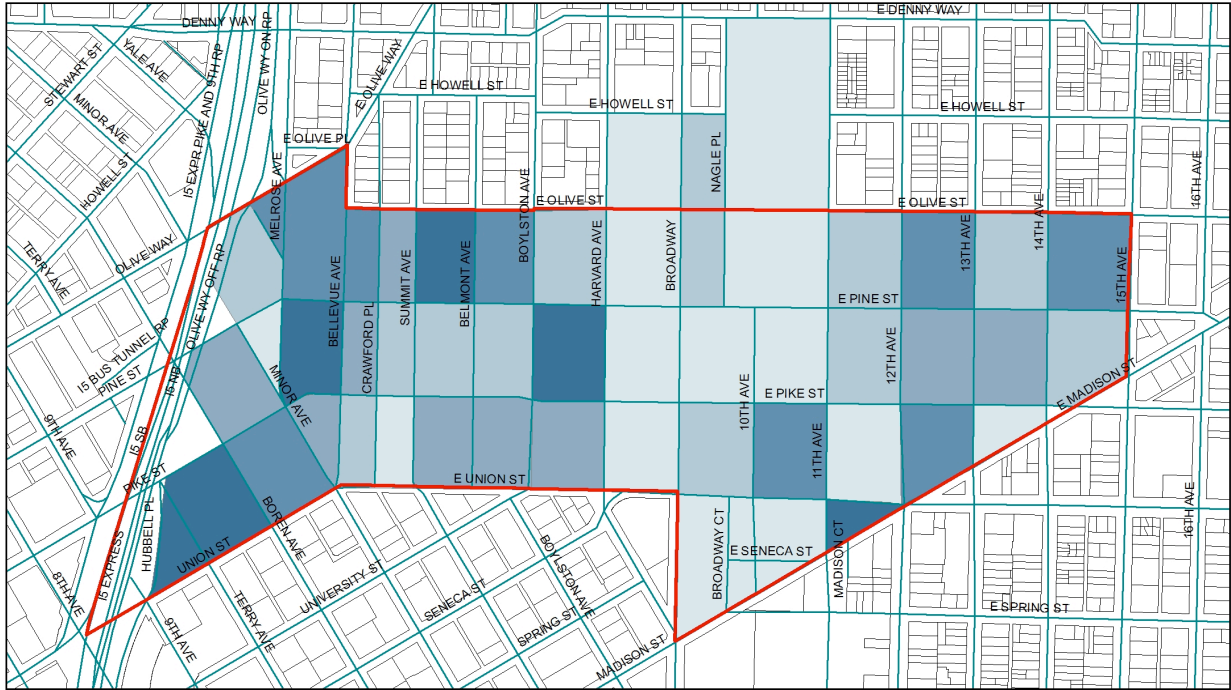
**Legend**

- Pike/Pine
- 0.96 - -0.79 (0 - 7%)
- 0.78 - -0.14 (8% - 36%)
- 0.13 - 0.41 (37% - 61%)
- 0.42 - 0.99 (62% - 81%)
- 1.00 - 1.29 (82% - 100%)

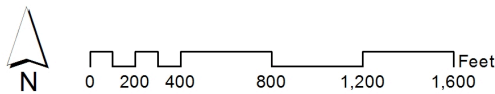


**Figure 4-14 Index for Housing Rental Ratio**

Figure 4-14 reflects the diversity of housing rental ratio in this neighborhood, which indicates that rental housing is mainly located in three areas: blocks on west side of the neighborhood, along Broadway, and along Pike/Pine corridor. This is because apartments for rent are mainly located in this area, where public transportation and business amenities are more accessible to renters. On the other hand, most condos and residential housing are located on periphery of the neighborhood.



**Pike/Pine Neighborhood Character Index for Housing Units**



**Legend**

- Pike/Pine
- 1.16 - -0.79 (0 - 14 Units/Acre)
- 0.78 - -0.18 (15 - 37 Units/Acre)
- 0.17 - 0.41 (38 - 60 Units/Acre)
- 0.42 - 1.25 (61 - 90 Units/Acre)
- 1.26 - 2.77 (91 - 150 Units/Acre)

**Figure 4-15 Index for Housing Units**

From Figure 4-15, we can know that most housing units are distributed on the east and west ends of the neighborhood, and there are only a few housing units located in the middle of the neighborhood. Even walking in this neighborhood, I recognized that there are more residential buildings on east and west ends of the neighborhood, and I only found limited numbers of residential buildings around Broadway.

## Diversity

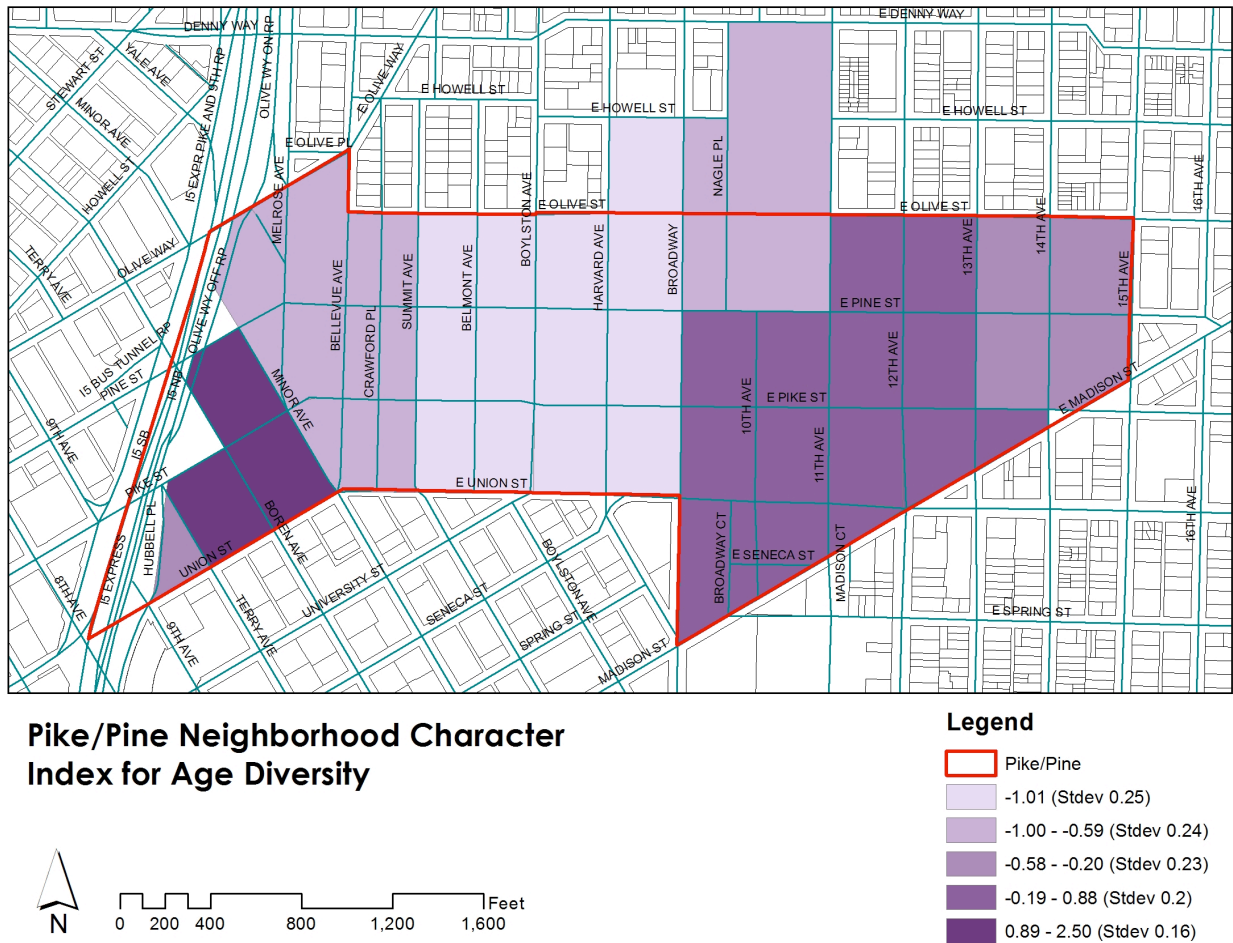
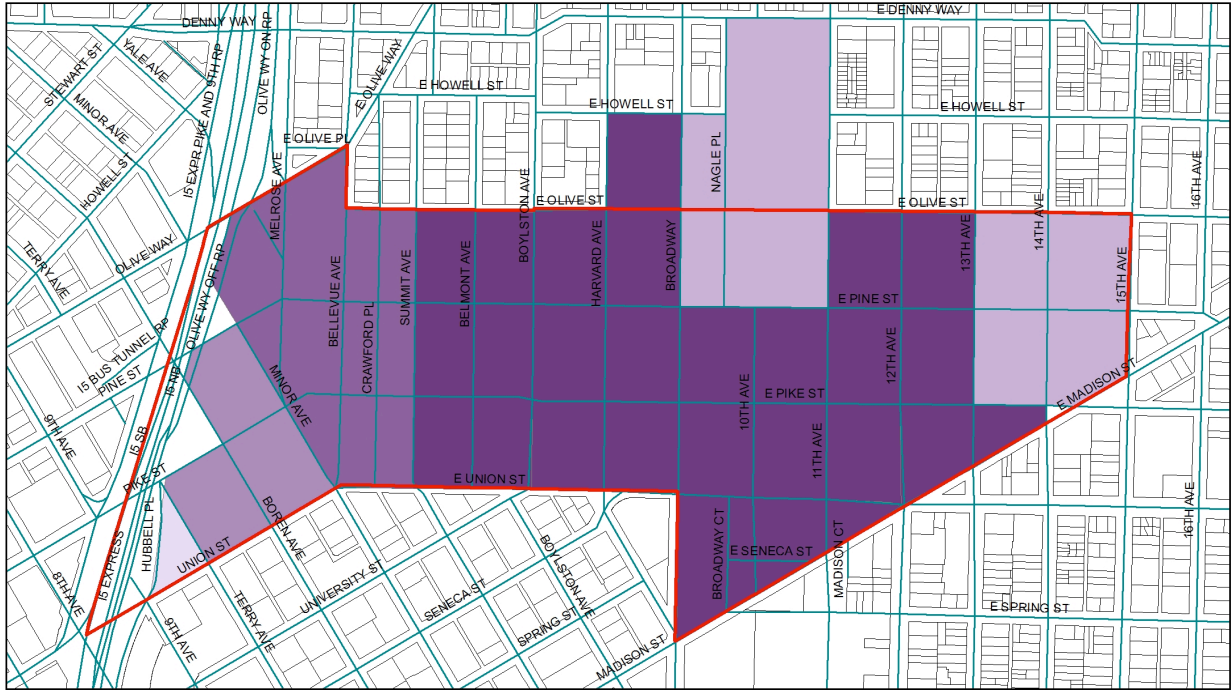
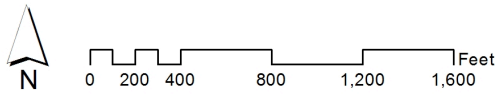


Figure 4-16 Index for Age Diversity

In terms of diversity, there are two areas quite diversified in age, and they are blocks on the southwest of Minor Ave and on the east of Broadway (see Figure 4-16 for detail). In general, this is a pretty new neighborhood with lots of young residents, and most housing is designed with modernized style to attract young people. But the concentration of an elderly population in these two areas makes them diversified in age, as there are several senior housing buildings on the southwest of Minor Ave.



**Pike/Pine Neighborhood Character Index for Race Diversity**

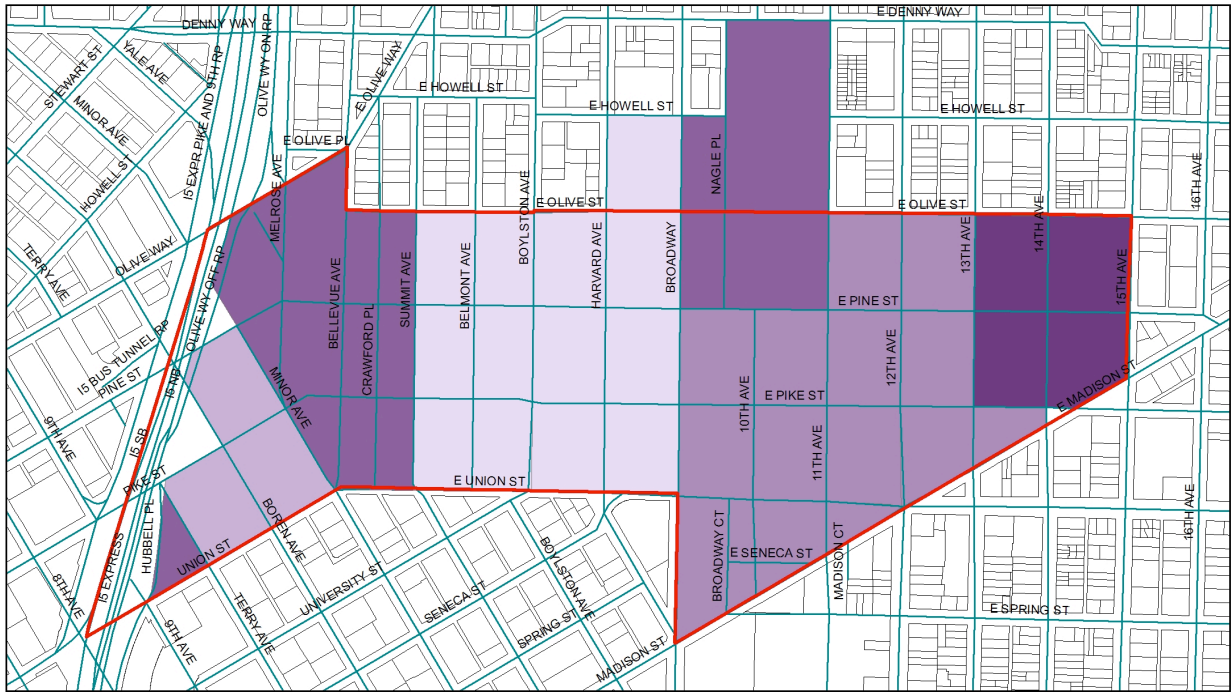


**Legend**

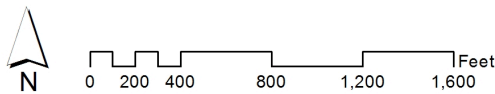
- Pike/Pine
- 4.74 (Stdev 0.36)
- 4.73 - -1.53 (Stdev 0.3, 0.31)
- 1.52 - -0.21 (Stdev 0.28)
- 0.20 - -0.14 (Stdev 0.27)
- 0.13 - 0.70 (Stdev 0.26)

**Figure 4-17 Index for Racial Diversity**

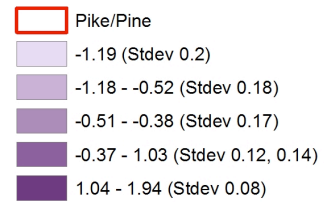
According to data from U.S. Census, most of the population in this neighborhood is white, and the percentage of white people ranges from 60% to 80%. From Figure 4-17, we can see that the most racially diverse blocks are located in the middle of the neighborhood, which have about 60% of white people and 40% of other races.



**Pike/Pine Neighborhood Character Index for Income Diversity**



**Legend**



**Figure 4-18 Index for Income Diversity**

Figure 4-18 demonstrates the distribution of income diversity in this neighborhood. Blocks on east end of the neighborhood make up an area where there are an almost even percentage of low-income, middle-income and high-income groups. However, the area to the east of Summit Ave and west of Broadway gets the lowest index value, because it has almost 60% low-income group and quite limited percentage of high-income group. For other parts of the neighborhood, the middle-income group occupies the main body with about half of the population.

## 4.1.2 Composite Neighborhood Character

### Visiting the Neighborhood

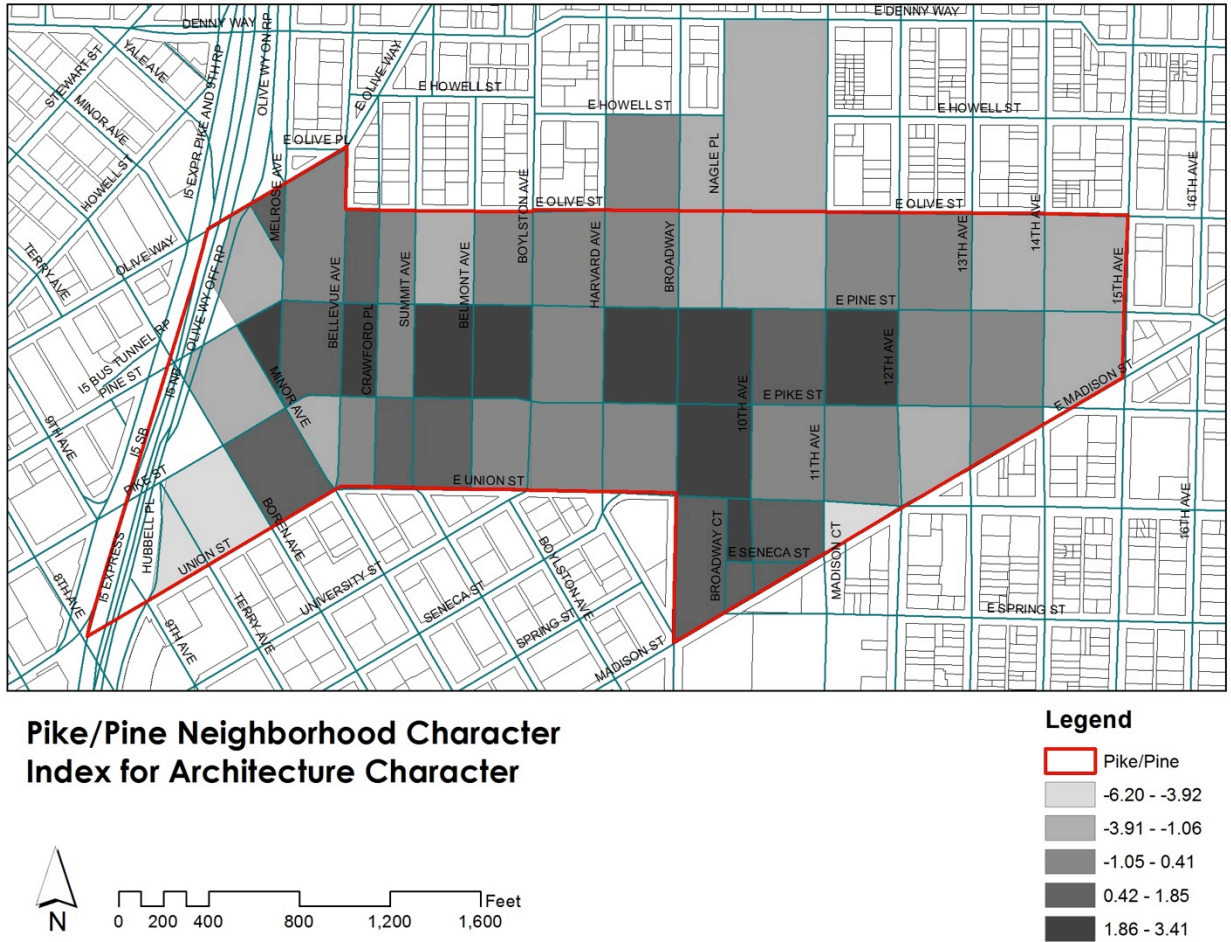
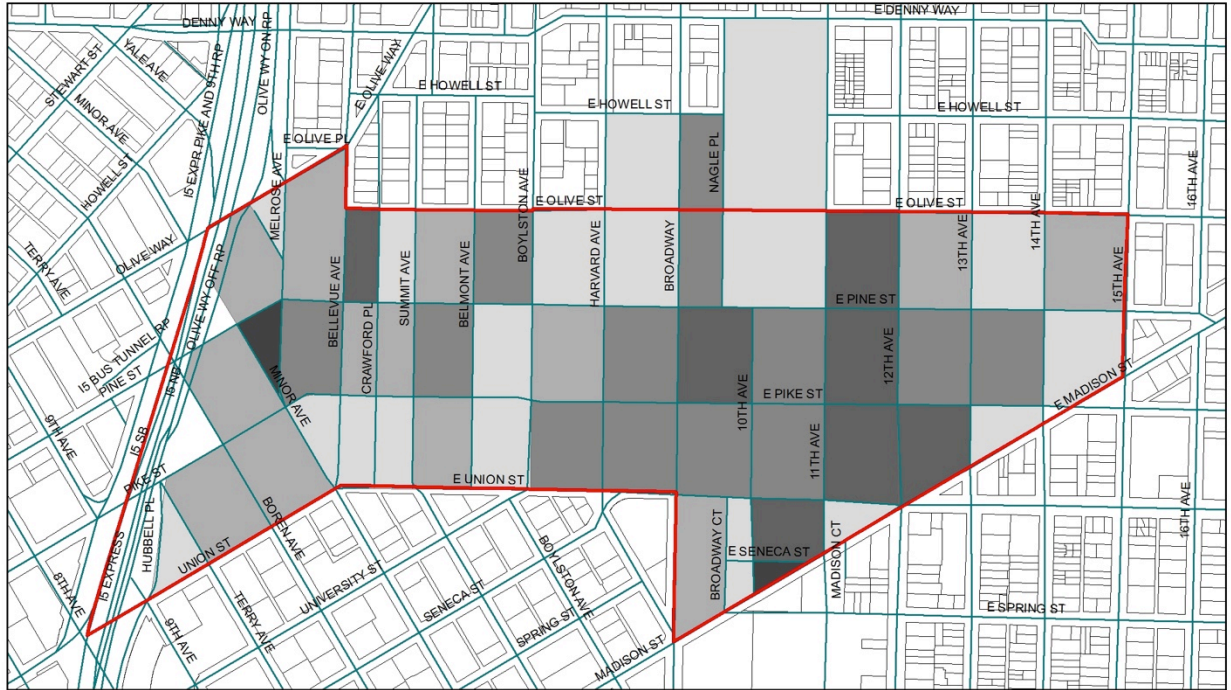


Figure 4-19 Index for Architecture Character



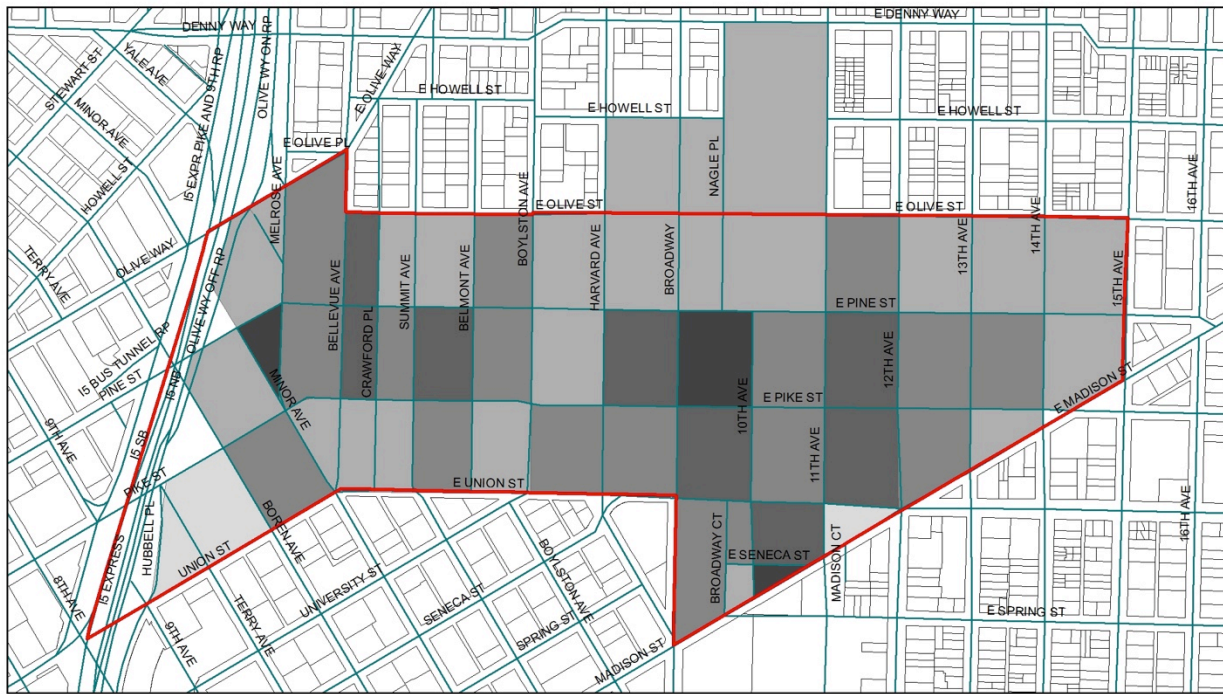
**Pike/Pine Neighborhood Character Index for Uses/Culture Character**

**Legend**

- Pike/Pine
- 2.03 - -1.48
- 1.47 - -0.11
- 0.10 - 1.53
- 1.54 - 3.44
- 3.45 - 8.03



Figure 4-20 Index for Uses/Culture Character



**Pike/Pine Neighborhood Character Index for Visiting the Neighborhood**

**Legend**

- Pike/Pine
- 7.78 - -5.95
- 5.94 - -0.98
- 0.97 - 1.84
- 1.85 - 4.80
- 4.81 - 11.44



**Figure 4-21 Index for Visiting the Neighborhood**

The specific indexes about architecture and use/culture mentioned above are aggregated respectively to get an index for “architecture character” (Figure 4-19) and an index for “uses/culture character” (Figure 4-20). From these two maps, we can know that most characteristic structures are congregated in the Conservation Core (Figure 2-5) and along the Pike/Pine corridor, and most characteristic uses/culture are distributed around Cal Anderson Park.

Then, indexes for architecture and use/culture are further aggregated to get an “index for visiting the neighborhood” (Figure 4-21), which can be interpreted as a measurement of superficial neighborhood characteristics that are easily perceived by visitors and travelers.

In this map, blocks with higher score are primarily located along the Pike/Pine corridor and especially in Pike/Pine Conservation Core (Figure 2-5). It means if a visitor from somewhere else wants to experience Pike/Pine neighborhood character, the best choice for him/her is to walk around in PPCOD Conservation Core.

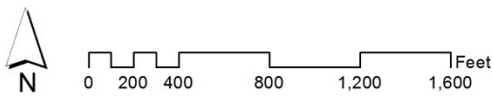
### Living in the Neighborhood



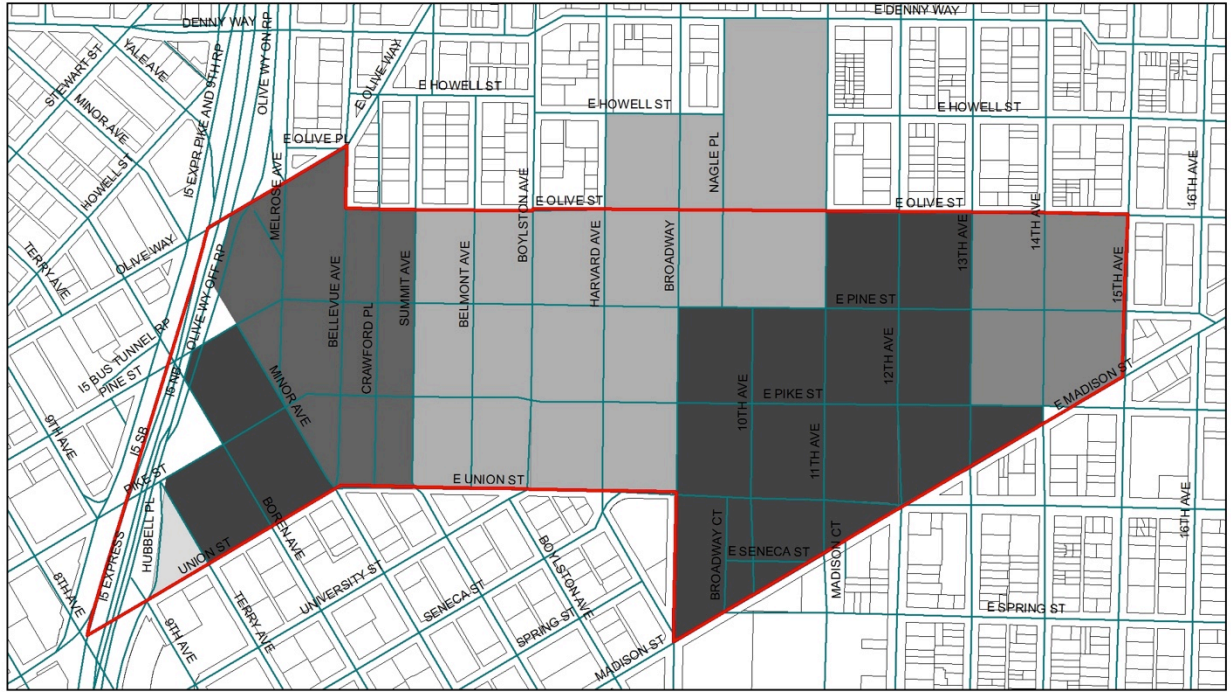
**Pike/Pine Neighborhood Character Index for Housing Character**

**Legend**

	Pike/Pine
	-5.23 - -1.84
	-1.83 - 0.12
	0.13 - 0.78
	0.79 - 1.94
	1.95 - 2.76



**Figure 4-22 Index for Housing Character**



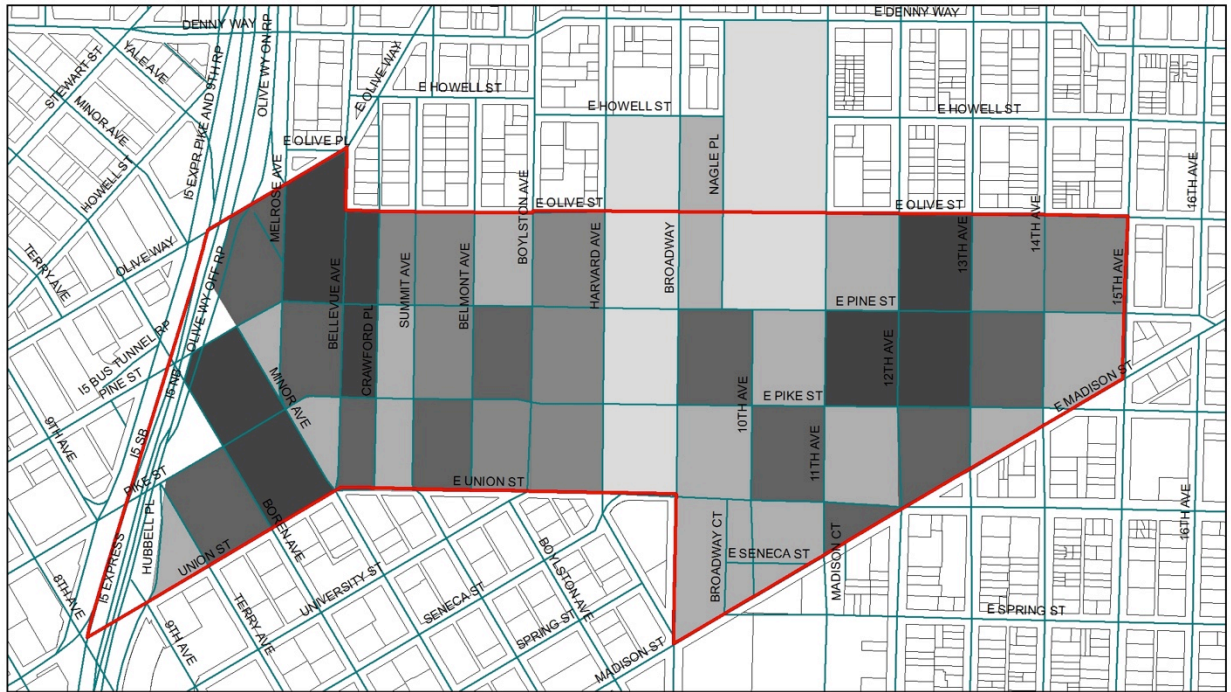
**Pike/Pine Neighborhood Character Index for Diversity Character**

**Legend**

- Pike/Pine
- 4.61
- 4.60 - -1.51
- 1.50 - 0.03
- 0.04 - 0.30
- 0.31 - 1.76



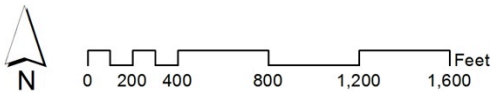
Figure 4-23 Index for Diversity Character



**Pike/Pine Neighborhood Character Index for Living in the Neighborhood**

**Legend**

- Pike/Pine
- 6.73 - -3.62
- 3.61 - -0.84
- 0.83 - 0.27
- 0.28 - 2.22
- 2.23 - 4.52



**Figure 4-24 Index for Living in the Neighborhood**

Index for housing character (Figure 4-22) and index for diversity character (Figure 4-23) are also respectively aggregated from specific indexes mentioned above. According to these two maps, blocks with stronger housing characteristics are concentrated at east and west ends of the neighborhood, and those diversified census block groups are primarily on the west end of the neighborhood and east of Broadway.

The Index for Living in the neighborhood (Figure 4-24) is aggregated from indexes for housing character and index for diversity character, which comprehensively reflect deep neighborhood character that can only be gradually perceived by people who choose to live here. According to this map, blocks on the east and west end of the neighborhood have

higher indexes, which means that there is stronger neighborhood character in housing and diversity to residents in that area.

#### 4.1.3 Correlation Analysis

Taking all indexes and maps mentioned above, we get an overview on the distribution and condition of Pike/Pine neighborhood character. Then, another question presents itself-are these neighborhood characteristics correlated with each other?

To answer this question, I conducted the Pearson correlation test to assess statistical links between all indexes for specific neighborhood characteristics. The result is attached in Appendix 1, and there are two outcomes from this analysis.

1) Characteristic building material is significant for attracting the most business and use/culture. It is found in correlation test that:

- Index for building material is positively correlated with index for commercial, office and retail, and index for art and performance space.
- Index for commercial, office and retail is positively correlated with index for bars, restaurants and cafes.

In other words, “buildings’ appearances” are important factors that influence whether there are large numbers of business and cultural facilities in this neighborhood. From the perspective of business and cultural facilities’ owners, when choosing a place to expand their work, they do care about whether a building looks “characteristic”, which can be directly embodied by its material.

2) To some extent, promoting housing character may weaken architecture character in this neighborhood. It is because:

- Index for housing units is negatively correlated with index for building age and index for building stories.

It seems to be obvious that old, low-story buildings cannot provide large numbers of housing units, and on the contrary new high-story buildings have more ability to accommodate residents in this neighborhood. In other words, there is no comprehensive strategy that can promote all of the Pike/Pine neighborhood characteristics at the same time.

## 4.2 Assessing Conditions of Neighborhood Character

In this part, findings are expanded in two aspects: 1) assessment at neighborhood scale and 2) assessment at block scale. At the neighborhood level, I researched the typology of architecture and use/culture and the typology of housing and diversity, which helped to explain this neighborhood's general conditions. At block level, I studied three designated blocks in detail, by exploring lessons learned and missed opportunities.

These two scales together comprehensively assess the conditions of the neighborhood character both in extent and in depth.

### 4.2.1 Assessment at Neighborhood Scale

#### **Architecture and Use/Culture**

Pike/Pine neighborhood has four categories of architecture typology - "old building", "rehabilitated old building", "old façade new building" and "new building". Most buildings in these categories can be easily distinguished even from the outside, which makes them have largely differing influence on neighborhood character. Generally speaking, from "old

building” to “new building”, neighborhood characteristics in these four categories’ go from stronger to weaker.

In terms of use/culture, buildings in these four categories tend to accommodate different types of businesses and cultural institutions. So this typology analysis also included features of use/culture in different buildings, like number of businesses, business types, etc.

“Old building”



Figure 4-25 Pacific Supply



Figure 4-26 Blick Art Material

“Old building” here indicates those buildings that have been in existence prior to 1940, and are related to the area’s early history as Seattle’s original “auto row”, according to the adopted Pike/Pine Overlay Ordinance.<sup>41</sup> Pacific Supply (Figure 4-25) and Blick Art Material (Figure 4-26) are representative of this category.

Buildings in this category have been intact or only slightly changed since they were first built. As most of these buildings were originally designed for “auto row” uses, their typical building features include high-ceiling space, wide span structures, open floor plan and

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<sup>41</sup> Office of the City Clerk. “City of Seattle Legislative Information Service (Council Bill Number: 118096; Ordinance Number: 124503)”. Seattle.gov. <http://clerk.seattle.gov/~scripts/nph-brs.exe?s3=&s4=124503&s5=&s1=&s2=&S6=&Sect4=AND&l=0&Sect2=THESON&Sect3=PLURON&Sect5=CBORY&Sect6=HITOFF&d=ORDF&p=1&u=%2F~public%2Fcbor1.htm&r=1&f=G>

carefully crafted facades. They are primarily made of brick or concrete, but large numbers of them have been seismically retrofitted while maintaining their original building materials.

Regarding use/culture, these buildings' architectural characteristics are attractive to most business owners. On the other hand, due to limitations on building stories and floor area, these buildings cannot accommodate large numbers of businesses or cultural institutions. As a result, most of these buildings have been adaptively reused for small retail stores, cafes and restaurants, and some buildings with big widths are further divided into separated spaces for different uses.

“Rehabilitated old building”



Figure 4-27 Elliott Bay Book Company (Outside)

Figure 4-28 Elliott Bay Bookstore (Inside)

“Rehabilitated old building” includes those structures that have been in existence prior to 1940, and have been largely rehabilitated for current use, which distinguish them from buildings in the first category. Elliott Bay Book Company (Figure 4-27 and Figure 4-28) is a representative of this category. During the rehabilitation process, the original building's wooden trusses and skylight that had been covered over were exposed again, and a

historically accurate window was introduced on the façade.<sup>42</sup> For buildings in this category, their basic architectural spaces and appearances are well conserved, but there are also some newly added elements.

Similar to buildings in the first category, these buildings' biggest attractions come from their architectural characteristics, but they also possess better amenities as they have already been rehabilitated. Therefore, these buildings tend to accommodate those owners who have requirements of architectural characteristics, and also care about having access to buildings with advanced amenities.

“Old façade, new building”



Figure 4-29 Sunset Electric Apartments



Figure 4-30 Broadstone Infinity Apartments

In recent years, several real estate developments in this neighborhood have conserved old buildings' characteristic facades and then built new buildings behind those old facades (Figure 4-29 and Figure 4-30). I defined these buildings as “old façade, new building”. These redevelopment projects rely on façade preservation to avail themselves of floor-

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<sup>42</sup> "A NEW CHAPTER..." The Elliott Bay Book Company. December 10, 2009. Accessed June 05, 2016. <http://www.elliottbaybook.com/new-chapter>.

space index incentives through the PPCOD.<sup>43</sup> From the perspective of urban design, this is a compromise between conservation and development, because it conserves people’s street view of characteristic structures and at the same time raises that parcel’s density. Because of height limitation in PPCOD, these buildings are mainly 5 to 6 stories.

Conserved old façades become symbols of neighborhood character, and as a result these buildings’ first two floors are generally used as retail, cafes and restaurants. Upper stories in these buildings can provide a large floor area, and they are usually used for apartments, condos or offices.

“New building”



Figure 4-31 Three20 Apartments



Figure 4-32 Terravita Luxury Apartments

“New building” here means those buildings that are totally new without any aged characteristic structures on site, like Three20 Apartments (Figure 4-4-31) and Terravita Luxury Apartments (Figure 4-32). As new buildings, they were carefully designed to be harmonious with this neighborhood’s context. For large-scale new developments, buildings are divided into several small bulks instead of one large bulk, in order to decrease their

<sup>43</sup> Chalana, Manish. "Balancing History and Development in Seattle's Pike/Pine Neighborhood Conservation District." *Journal of the American Planning Association* 82, no. 2 (2016): 182-84.

visual impact on the neighborhood. For those buildings inside PPCOD, they are also limited to 5 to 6 stories height. Similarly, with buildings in “old façade, new building”, most buildings in this category lease their first one or two floors as retail, cafes or bars, and use upper floors for housing. These buildings do not have a neighborhood characteristic component, but they can provide modernized new amenities to business owners and residents.

**Housing and Diversity**

There are diverse housing types in this neighborhood that can be summarized into three categories: single family housing, condominium and apartment. Their neighborhood character gets stronger going from single family housing to apartment. This housing typology has further influence on neighborhood diversity, because different categories of housing tend to accommodate different groups of residents. Both housing and diversity features were described here.

**Single Family Housing**



**Figure 4-33 Single Family Housing on 1205 E Olive St      Figure 4-34 Single Family Housing on 1633 14 Ave**

There are limited numbers of single family houses in this neighborhood, like it is shown in Figure 4-33 and Figure 4-34. Generally, they are large in size, but each building can only

accommodate one family. Compared with the other two types housing, especially apartments, residents in single family housing tend to relocate with less frequency. Of all three types of housing, this is the least affordable housing type.

### Condominium



**Figure 4-35 Onyx Condominium**



**Figure 4-36 Press Condominium**

Condominiums provide a way for people to own property in this neighborhood (see Figure 4-35 and Figure 4-36), and each condominium can provide dozens of dwelling units. This property ownership right determines that this housing type is not designed for renters and its residents need to have enough economic ability to purchase a unit. As with single family housing, this housing type could be better for the neighborhood population's stability, but worse for housing affordability.

## Apartment



Figure 4-37 Oxford Crest Apartments



Figure 4-38 Evolve Apartments

Apartment is the most popular housing type in this neighborhood, and each apartment building can accommodate dozens of families (see Figure 4-37 and Figure 4-4-38). This housing type is designed for renters, which makes its residents have very high liquidity. Their housing size is usually similar with that of condo, and smaller than that of single-family housing. Considering their housing type and size, apartments have largest potential to accommodate diversified groups of people.

## 4.2.2 Assessment at Block Scale

### Selected blocks



Figure 4-39 Two Selected Blocks for Assessment

To better understand how neighborhood character is embodied at block level, three blocks (see Figure 4-39) are selected for detailed assessment. Referring to outcome of “measuring distributions of neighborhood character”, Block A and Block B on west side of the neighborhood performs well on “living in the neighborhood”, and Block C at the center of the neighborhood gets high index on “visiting the neighborhood”.

## Block A & Block B



Figure 4-40 Map of Block A

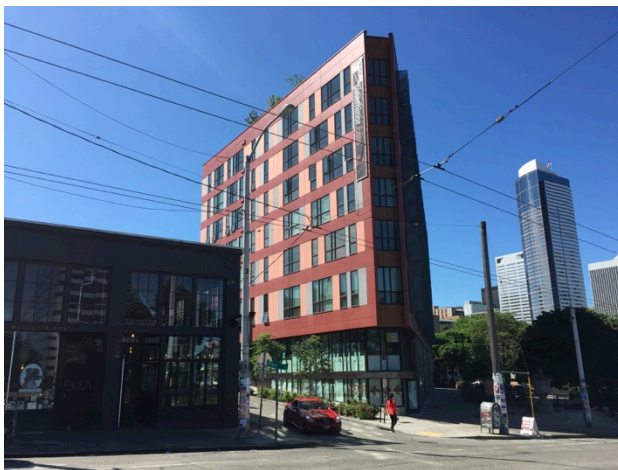


Figure 4-41 Pine+Minor Apartments



Figure 4-42 A2 Villa Apartments



Figure 4-43 Starbucks Reserve

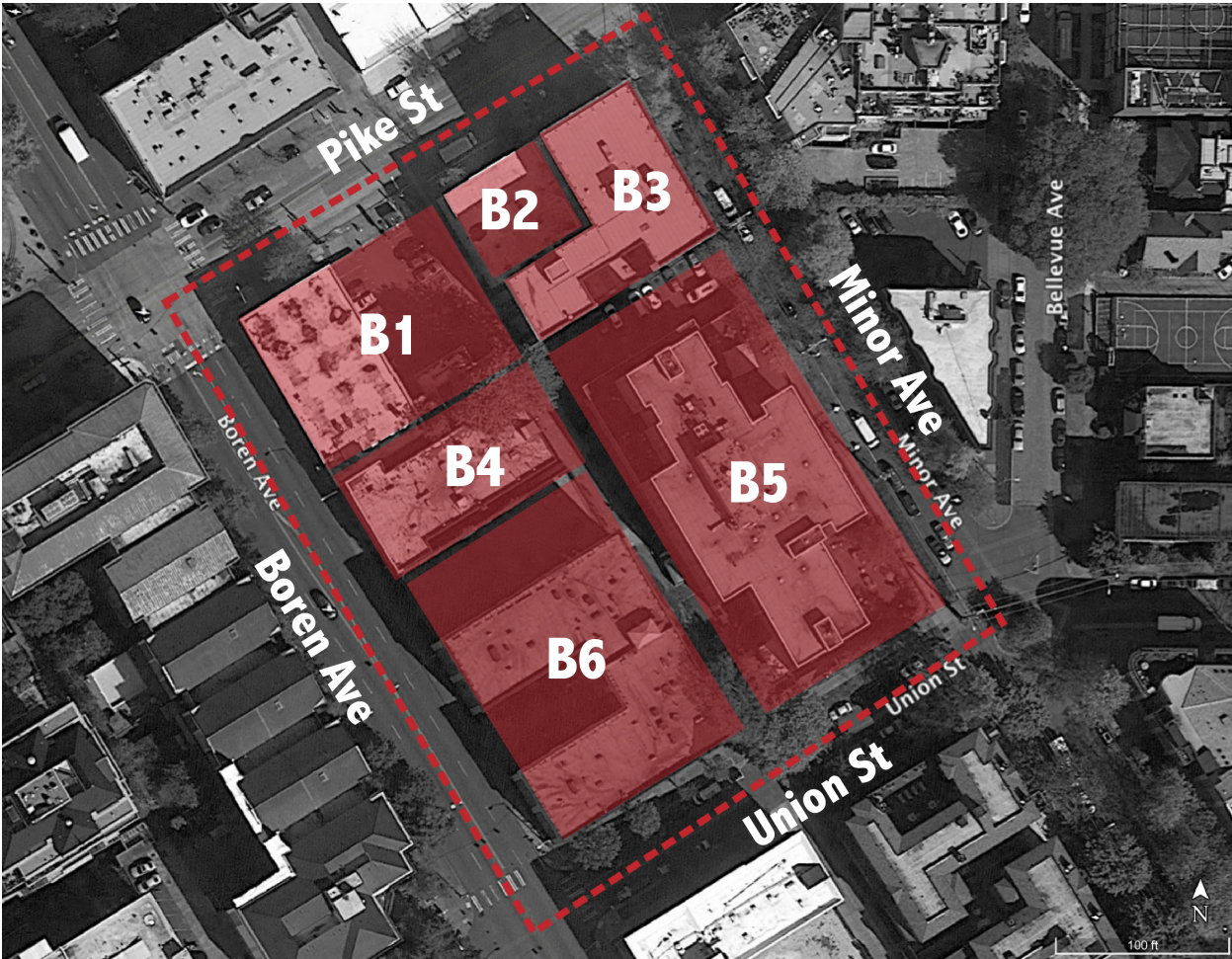


Figure 4-44 Map of Block B



Figure 4-45 B1 Salvation Army Food Bank



Figure 4-46 B2 Club Z



Figure 4-47 B3 Wintonia Community Housing



Figure 4-48 Embassy Apartments



Figure 4-49 B5 Merrill Gardens at First Hill



Figure 4-50 B6 Oxford Crest Apartments

Block A and Block B are located at west end of the Pike/Pine neighborhood, close to downtown Seattle, and Block A is just adjacent to I-5. Detailed information about parcels in Block A and Block B can be found at Figure 4-40, Figure 4-44 and Table 3.

Broadly speaking, these two blocks have large numbers of apartment buildings, which are the main reason of their outstanding performance on “living in the neighborhood”. In these two blocks, we can see lots of older buildings are adaptively reused to accommodate residents and businesses, like building in Parcel A2. On the other hand, those newer buildings successfully raised this area’s housing and population density with their higher FAR, like Pine+ Minor Apartments on Parcel A1. All these reasons together form the basic features of Block A and Block B. If zoom into the parcel level, we can further generalize several lessons learned and missed opportunities for future development.

**Table 3 Detailed Information about Parcels in Block A and Block B**

Parcel	Land Use	Typology	Building Age	Built Form	Building Use
A1 (Figure 4-41)	Apartment (mixed use)	New building/ Apartment	3 years	7 stories/ 88976 gross sqft	120 housing units/ 1 business unit
A2 (Figure 4-42)	Apartment (mixed use)	Rehabilitated old building/ Apartment	108 years	4 stories/ 27247 gross sqft	62 housing units/ 5 business unit
A3 (Figure 4-43)	Service Building	Rehabilitated old building	96 years	2 stories/ 15923 gross sqft	2 business units
B1 (Figure 4-45)	Office Building	New building	70 years	2 stories/ 21244 gross sqft	1 business unit
B2	Apartment	Rehabilitated old	110 years	3 stories/ 10800	0 housing unit/1

(Figure 4-46)		building		gross sqft	business unit
B3 (Figure 4-47)	Group Home	Old building/ Apartment	107 years	6 stories/ 61976 gross sqft	Unknown housing unit/ 3 business units
B4 (Figure 4-48)	Apartment	Old building/ Apartment	91 years	3 stories/ 21712 gross sqft	45 housing units
B5 (Figure 4-49)	Retirement Facility	New building/ Apartment	47 years	6 stories/ 95117 gross sqft	99 housing units
B6 (Figure 4-50)	Apartment	Old building/ Apartment	91 years	4 stories/ 63681 gross sqft	63 housing units

First, adaptively reused old buildings still have large capabilities to accommodate residents, and they may also have a positive influence on diversity characteristics. Villa Apartments (A2, see Figure 4-42) Wintonia Community Housing (B3, see Figure 4-47), and Oxford Crest Apartments (B6, see Figure 4-50) are examples of this argument.

Villa Apartments was first built as hotel with street level retail in 1908, and it was then rehabilitated in 1980 to become affordable housing.<sup>44</sup> Now it has a total of 62 units of housing (40 studios and 22 one bedroom), and its average unit size is 483 Sqft. As affordable housing, this property was rehabilitated using the Low Income Tax Credit Program, and its renters are able to use Section 8 vouchers.<sup>45</sup> Wintonia Community

<sup>44</sup> "Villa Apartments." Capitol Hill Housing. Accessed May 15, 2016.

<https://www.capitolhillhousing.org/ourproperties/buildings/villa.php>.

<sup>45</sup> "Villa Apartments in Seattle, WA." Villa Apartments in Seattle, WA. Accessed June 04, 2016.

<http://affordablehousingonline.com/housing-search/Washington/Seattle/Villa-Apartments/101611/>.

Housing is a mixed-use building with boarding home on the upper level and retail at the street level. It was built in 1909 and rehabilitated in 1990. According to King County Tax Assessor, this building's "rooming house (551)" section use is 46,750 (net sqft), and there is a total of 92 flat units.<sup>46</sup> Based on calculation, this building's average housing unit size is 508 sqft (There is no direct data on average housing unit size). Zillow.com estimates its average unit rental as 2,795/Month.<sup>47</sup> Oxford Crest Apartments was first built in 1925 and remodeled in 1983. It has three unit types with respective sizes of 540 sqft, 850 sqft and 800 sqft, and its total number of units is 63.<sup>48</sup> In this building, a unit's rental price ranges from \$1295 to \$1750.<sup>49</sup> In general, these old buildings are successfully rehabilitated for current "housing" use, and they are able to accommodate large numbers of residents in this neighborhood. Moreover because of their diversified options on unit size and rental price, they are able to further promote this neighborhood's diversity by attracting different residents in terms of income, race, etc. The sample of Villa Apartments also inspires us in that affordable housing programs can be potential financing sources for old building's rehabilitation, because this adaptive reuse of old buildings can generate double benefits on both affordable housing and neighborhood character.

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<sup>46</sup> King County Department of Assessments. "Parcel 872560-0350" King County.gov. March 17, 2016. Accessed June 4, 2016.

<http://blue.kingcounty.com/Assessor/eRealProperty/Detail.aspx?ParcelNbr=8725600350>.

<sup>47</sup> "1431 Minor Ave, Seattle, WA 98101." Zillow. Accessed June 4, 2016.

[http://www.zillow.com/homes/for\\_rent/house,condo,apartment\\_duplex,mobile,townhouse\\_type/49098696\\_zpid/any\\_days/featured\\_sort/47.614324,-122.327364,47.613196,-122.329595\\_rect/18\\_zm/](http://www.zillow.com/homes/for_rent/house,condo,apartment_duplex,mobile,townhouse_type/49098696_zpid/any_days/featured_sort/47.614324,-122.327364,47.613196,-122.329595_rect/18_zm/).

<sup>48</sup> King County Department of Assessments. "Parcel 197820-0425." King County.gov. March 17, 2016. Accessed June 4, 2016.

<http://blue.kingcounty.com/Assessor/eRealProperty/Detail.aspx?ParcelNbr=1978200425>.

<sup>49</sup> "Oxford Crest Apartments Rentals - Seattle, WA | Apartments.com." Apartments.com. Accessed June 04, 2016. <http://www.apartments.com/oxford-crest-apartments-seattle-wa/4n1gkrl/>.

Second, new developments are able to densify this neighborhood, and largely increase this neighborhood's ability to accommodate more people. Pine + Minor Apartments (A1, see Figure 4-41) is a good example of this viewpoint.

Pine + Minor Apartments is a new real estate development was constructed in 2013 with total 120 units of dwellings, and its average unit size is 501 Sqft. Its rental price ranges from \$1450 - \$1624/Month for studio and \$1845 - \$2195/Month for 1 bedroom unit.<sup>50</sup> Compared with adaptively reused old buildings, these new developments always have a higher FAR, which enable them to provide higher numbers of housing units in this neighborhood. At the same time, thanks to the development of building technologies and real estate studies, they are typically better designed and managed to fulfill current market and residents' demand.

Finally, diversified housing and facility types contribute a lot to this neighborhood's diversity character. For example, in such a neighborhood with a large percent of young people, Merrill Gardens at First Hill (B5, see Figure 4-49) accommodates many elderly people, and it largely contributes this neighborhood's age diversity.

Merrill Gardens at First Hill is a retirement facility, which was built in 1969 and rehabilitated in 1995. It has total 99 units of housing with 3 unit types, and these unit sizes are respectively 323 sqft, 463 sqft and 549 sqft.<sup>51</sup> This facility does not only provide basic living amenities, but also some special programs for elders, like assisted living, memory

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<sup>50</sup> King County Department of Assessments. "Parcel 066000-1905." King County.gov. March 17, 2016. Accessed June 04, 2016.

<http://blue.kingcounty.com/Assessor/eRealProperty/Dashboard.aspx?ParcelNbr=0660001905>.

<sup>51</sup> King County Department of Assessments. "Parcel 872560-0380." King County.gov. March 17, 2016. Accessed June 04, 2016.

<http://blue.kingcounty.com/Assessor/eRealProperty/Detail.aspx?ParcelNbr=8725600380>.

care and respite care service. As a result, it forms a friendly retirement community to attract elderly residents coming to this neighborhood.

On the other hand, these two blocks still have large potentials for development in the future, especially its Salvation Army Food Bank with vacant land (B1, see Figure 4-45) and Club Z (B2, see Figure 4-46 B2).

The vacant land is used as parking lot now, and it is definitely underutilized in such an “Urban Center Village”. In the future, a mixed-use building with ground level as retail and upper level as residential or office will be appropriate to fill in this vacant land. If this new building were well designed and managed, it would be especially helpful for promoting use/culture character and housing character in this block by accommodating large numbers of residents and uses.

Different from the vacant parcel, the building of Club Z has been there since 1906, but it still has large potential for rehabilitation and redevelopment in the future. From an architectural perspective, this building’s façade is covered by new paint, which conceals its original historical character. Moreover, this building’s interface toward street is quite close and negative, and its uses inside have no connections with public activities outside on the street. These are all deficiencies that can be improved in the future.

**Block C**



**Figure 4-51 Map of Block C**



**Figure 4-52 C1 Seattle Central Com College (1)**



**Figure 4-53 C2 Seattle Central Com College (2)**



Figure 4-54 C3 Vacant Parcel



Figure 4-55 C4 Odd Fellows



Figure 4-56 C5 Mud Bay



Figure 4-57 C6 Elliott Bay Bookstore (and Totokaelo)



Figure 4-58 C7 Shell Gas Station



Figure 4-59 C8 Ballet



**Figure 4-60 C9 Comet Tavern**

Block C is located at the center of the Pike/Pine neighborhood, between E Pike St and E Pine St, and to the southwest of Cal Anderson Park. Detailed information about parcels in Block C can be found at Figure 4-51 and Table 4.

This block has only one new building- Shell Gas Station, and other buildings are in the categories of either “old building” or “rehabilitated old building”. Except for Shell Gas Station, buildings in this block are about 100 years old. These buildings has successfully conserved and inherited the Pike/Pine neighborhood character. But they are also shorter and smaller in size especially compared with those newer developments outside of this block. In terms of building use, most of these older buildings are adaptively reused to accommodate business/culture units rather than housing units. Therefore, at parcel level, I took Odd Fellows and Elliott Bay Bookstore as samples to get lessons on how to adaptively reuse old buildings.

**Table 4 Detailed Information about Parcels in Block C**

Parcel	Land Use	Typology	Building Age	Built Form	Building Use
C1 (Figure 4-52)	Office building	Old building	110 years	3 stories; 18000 gross sqft	1 business unit

C2 (Figure 4-53)	Retail store	Old building	104 years	2 stories; 4720 gross sqft	1 business unit
C3 (Figure 4-54)	Vacant land	NA	NA	NA	NA
C4 (Figure 4-55)	Office building	Old building	108 years	4 stories; 76803 gross sqft	13 business units
C5 (Figure 4-56)	Retail store	Rehabilitated old building	107 years	1 story; 8900 gross sqft	4 business units
C6 (Figure 4-57)	Warehouse	Rehabilitated old building	96 years	1 story; 35948 gross sqft	3 business units
C7 (Figure 4-58)	Conv Store with Gas	New building	50 years	1 story; 1898 gross sqft	2 business units
C8 (Figure 4-59)	Apartment (mixed use)	Old building/ Apartment	108 years	3 stories; 19729 gross sqft	17 housing units/ 2 business units
C9 (Figure 4-60)	Apartment	Old building/ Apartment	106 years	3 stories; 32100 gross sqft	28 housing units/ 2 business units

Odd Fellows is a mixed-use building with retail, restaurants and office, which was first built in 1908 and rehabilitated in 2000.<sup>52</sup> In terms of architecture, even though this is not a typical “auto row” style building, it still reflects this neighborhood’s history and changes overtime. This building is made of masonry, with decent and well-rehabilitated decorations on the façade. Regarding use/culture, there are a total of 13 hand-selected tenants in this building now. This building’s ground level is mainly occupied by restaurant, retail and café tenants, and its upper levels are used as office and performance space. This building’s good performance on use/culture comes from two key points. First, it provides diversified

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<sup>52</sup> King County Department of Assessments. "Parcel 600350-0460." King County.gov. Accessed June 05, 2016. <http://blue.kingcounty.com/Assessor/eRealProperty/Detail.aspx?ParcelNbr=6003500460>.

business units for rent at different floor levels. This building's entry level and second level floor plan can be found at Figure 4-61 and Figure 4-62.

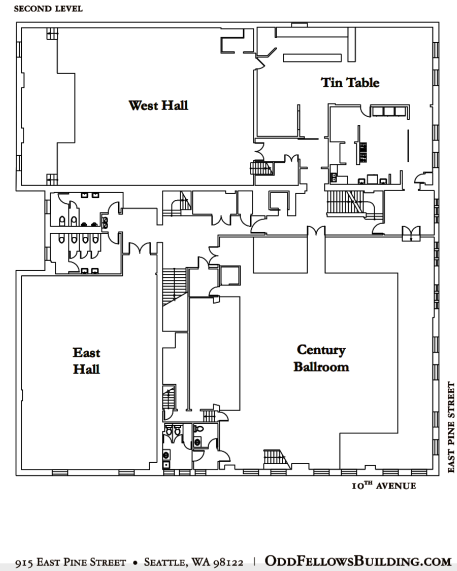
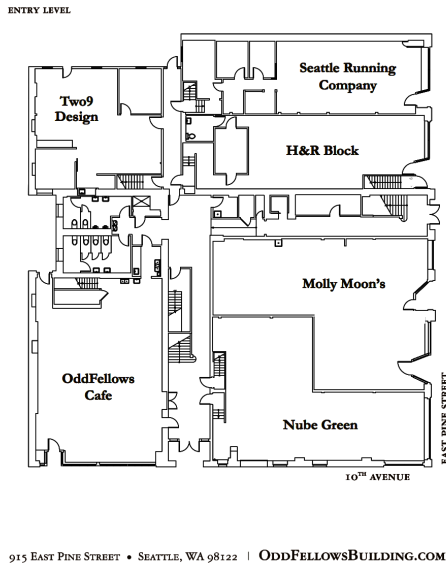


Figure 4-61 OddFellows Floor Plan- Entry Level<sup>53</sup>

Figure 4-62 OddFellows Floor Plan- Second Level<sup>54</sup>

The building of Elliott Bay Bookstore was first built in 1918 as the original Ford truck service center for Seattle, and Elliott Bay Bookstore rehabilitated and moved into this building in 2010.<sup>55</sup> As mentioned before, this building's rehabilitation successfully exposed its original architectural character, and made its interior space appropriate for new users. It also successfully increased the building's floor area by taking advantage of the building's large ceiling height and adding a mezzanine (see Figure 4-63). Another trick in adaptive reuse of an old building is that buildings with large widths can be horizontally divided for different uses. Looking closely at Figure 4-57 C6 Elliott Bay Bookstore (and Totokaelo) this building is actually occupied by two users: Elliott Bay Bookstore and Totokaelo. These two

<sup>53</sup> "Oddfellows Building." Oddfellows Building. Accessed June 05, 2016. <http://www.oddfellowsbuilding.com/>.

<sup>54</sup> "Oddfellows Building." Oddfellows Building. Accessed June 05, 2016. <http://www.oddfellowsbuilding.com/>.

<sup>55</sup> "A NEW CHAPTER..." The Elliott Bay Book Company. December 10, 2009. Accessed June 05, 2016. <http://www.elliottbaybook.com/new-chapter>.

uses are divided from inside and also distinguished from outside just with different colors of paint, which makes the large building look like two different buildings.



Figure 4-63 Mezzanine Inside Elliott Bay Bookstore

On the other hand, this block has missed opportunities for future development, because there are at least three underutilized buildings, and they are Mud Bay (C5, see Figure 4-56), Shell Gas Station (C7, see Figure 4-58) and Comet Tavern (C8, see C7 Shell Gas Station Figure 4-59 C8 Ballet).

Mud Bay is located in a large parcel, but the building only occupies the southern part of the parcel and leaves the north part as parking lot. Because this parcel is close to the intersection of Broadway and E Pine St, around which there are abundant bus stops and

also a streetcar station, there are both great cultural and economic values to redeveloping this parcel. For this redevelopment, we should consider both the conservation of existing architecture character and feasibility of new construction.

Comet Tavern is also underutilized, and could be rehabilitated and redeveloped. This building is almost abandoned now, with only a bar and a restaurant occupying part of its ground floor. It was first constructed in 1910, and was then rehabilitated in 1960. It has been more than 50 years since it was rehabilitated, and it looks decaying and shabby even from the outside. Because this building still has strong neighborhood character and records much of the Pike/Pine neighborhood's history, this parcel's future redevelopment needs to carefully balance "conservation" and "new construction".

## 5 Suggestions

All analysis above depicted an overall portrait of Pike/Pine neighborhood at different scale levels. In this process, we found lots of potential and opportunities for promoting neighborhood character. These serve as good starting points for urban design suggestions in the future.

### 5.1.1 Potentials for Promoting Neighborhood Character

First, Pike/Pine neighborhood characteristics are unevenly distributed spatially, and it has large potential for improving this situation. According to the outcome of "measure distributions of neighborhood character", blocks with high performance on "visiting the neighborhood" were mainly concentrated along Pike/Pine corridor and especially around

PPCOD conservation core. But blocks with high indexes on “living in the neighborhood” were primarily located at the east and west ends of the neighborhood. This could interfere with people’s perceptions of this neighborhood as a whole, and weaken this community’s mixed-use identity.

Second, conflict between conservation and new construction is still the most significant problem that impedes this neighborhood’s development, and it need to be dealt with in the future. According to “assess conditions of neighborhood character at the neighborhood scale”, old characteristic buildings and new construction both have their own strengths and weaknesses. Old characteristic buildings contribute much to this neighborhood’s architecture character, but they do not contribute density and large numbers of housing units to this neighborhood. On the other hand, new constructions have impacts on architecture character, but they positively influence housing and diversity character. In terms of architecture typology, “old building” and “rehabilitated old building” focused on conservation, and “old façade, new building” and “new building” were the outcome of new development. Although “old façade, new building” partly conserved those old characteristic structures, this kind of “facadism” conservation is still not enough to preserve neighborhood character.

Third, there are still large numbers of underutilized properties in this neighborhood, and they can be refilled, rehabilitated, or redeveloped in the future. Through “assess conditions of neighborhood character at block scale”, we learned about lessons from good precedents and also found underutilized properties for development. Other blocks that were not selected as samples also have many underutilized properties like these three blocks.

### 5.1.2 Urban Design Suggestions

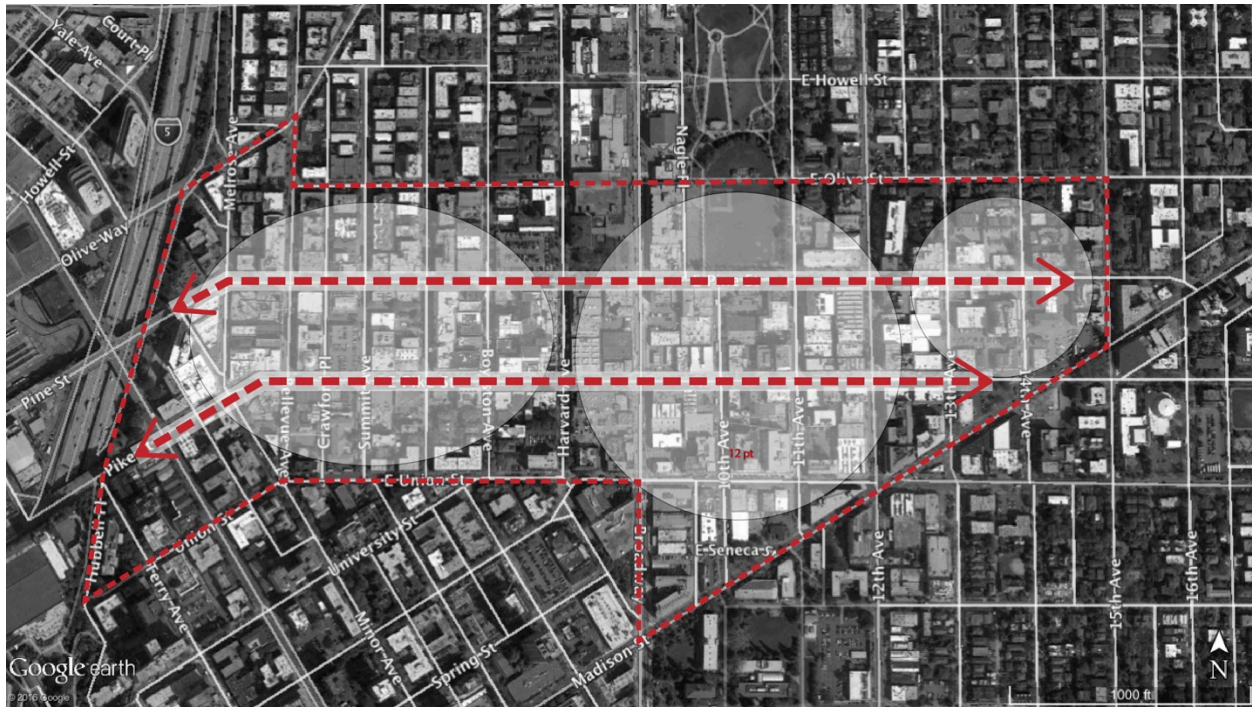
The primary principle of this thesis is to promote Pike/Pine neighborhood character in general, rather than simply conserve characteristic structures. As a result, architecture, use/culture, housing and diversity were all considered for urban design suggestions. Here are some specific suggestions:

- Designate priorities for different neighborhood characteristics in different areas

As discussed in previous chapters, no neighborhood characteristic was able to perform well everywhere, which was determined by resources and policy issues together. As a result, different areas need to have emphasis on different neighborhood characteristics. For example, for those areas abundant in old structures, like PPCOD conservation core, architecture and use/culture character should be given higher priority, and new developments need to focus on conserving characteristic structures and their existing uses/culture. For other areas, housing and diversity character may be prioritized in new developments. This suggestion would be helpful to zoning and PPCOD ordinances update.

- Enhance spatial connections between segregated areas

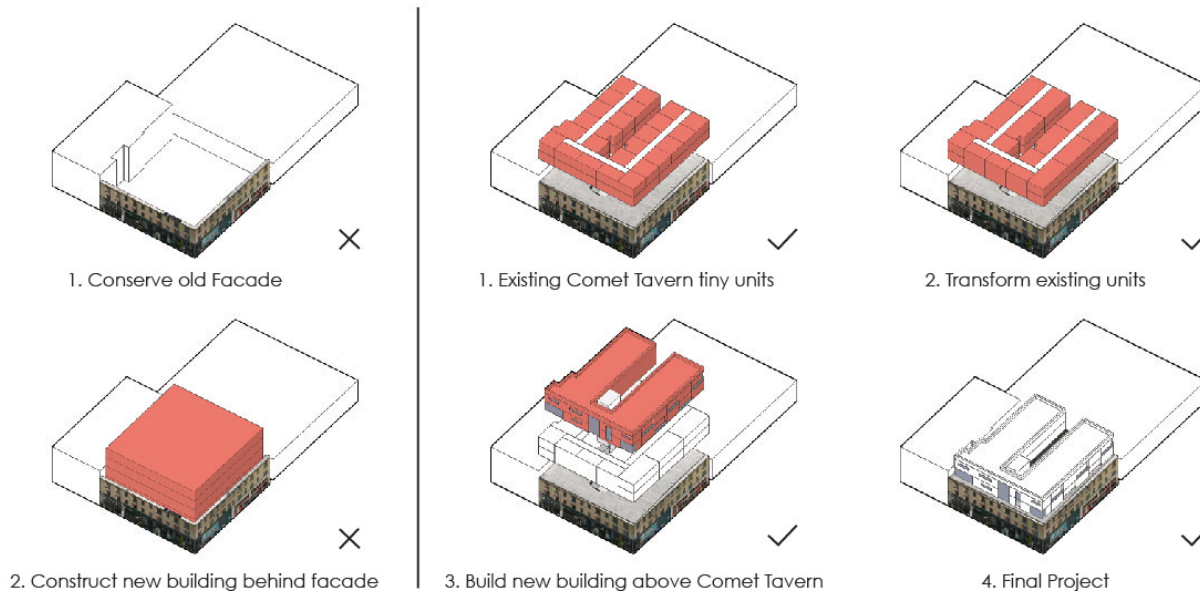
To eliminate negative impacts from neighborhood character's uneven distribution, we need to enhance spatial connections between different areas, especially areas with high indexes on "visiting the neighborhood" and areas with strong character on "living in the neighborhood." This could help residents build up their senses of belonging and identity to this mixed-use neighborhood, and also help visitors have deeper perceptions of Pike/Pine neighborhood character as a whole. For example, to eliminate segregations on the east west direction, Pike/Pine corridor can be enhanced with specific urban design techniques (Figure 5-1), like street design, signage design, transportation planning, etc.



**Figure 5-1 Urban Design Strategies for Enhancing Spatial Connections.**

- Develop new building typology to better integrate conservation and development

In this neighborhood, conservation and development at an architectural level could be better integrated than it was done before. The gap between “rehabilitated old building” and “old façade, new building” could be filled with a new typology conserving more elements of old structures in new development, and I would like to call this “old + new building”. Comet Tavern (Figure 5-2) is a good example to demonstrate this new typology. With the typology of “old façade, new building”, only the old façade of Comet Tavern would be conserved in future development. But the typology of “old + new building” may instruct architects to rehabilitate and adaptively reuse the existing Comet Tavern first, and then add new buildings above existing structures. This suggestion could be useful to future architecture design and urban design guidelines.



**Figure 5-2 Example of New Architecture Typology**

- Promote resilience at different scale levels

Analysis of use/culture and diversity character inspired me that success of these intangible neighborhood characters is closely related to a built environment’s resilience. In other words, buildings and urban space with high resilience are more likely to accommodate and be adaptively reused for different uses. Lessons from Odd Fellows and Elliott Bay Bookstore are good examples to support this argument. Therefore, whatever the scale, whether it be in the design of the city or of the dwelling, it is important not to design everything. Leaving some ambiguity in the way space can be used opens the door to interpretation and variety.<sup>56</sup> For example, vacant parcel can accommodate different uses and buildings’ large ceiling heights and open floor plans can leave users’ some ambiguity to reorganize the interior space (Figure 5-1, Figure 5-3 and Figure 5-4). It is worth including this suggestion in future urban design guidelines, zoning and PPCOD ordinances.

<sup>56</sup> Moudon, Anne Vernez. *Built for change: neighborhood architecture in San Francisco*. Mit Press, 1986.

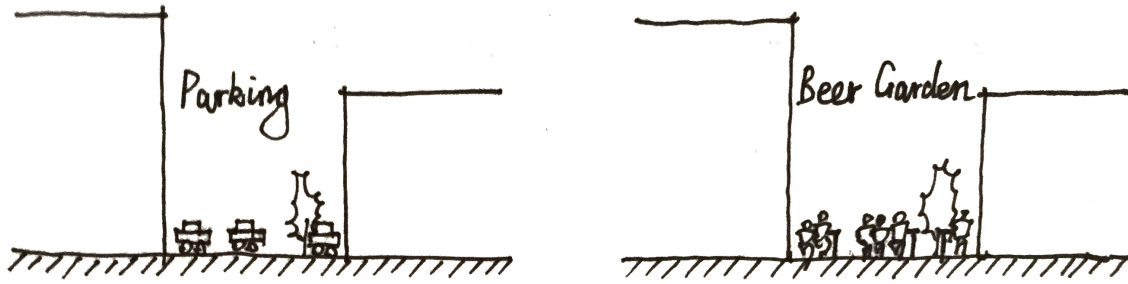


Figure 5-3 Resilience at Block Scale

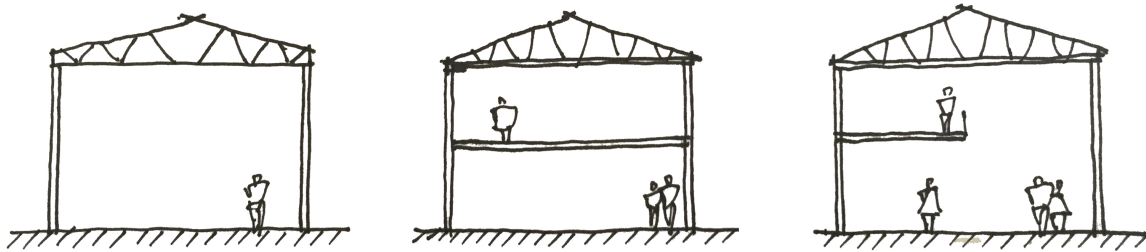


Figure 5-4 Resilience at Building Scale (section)

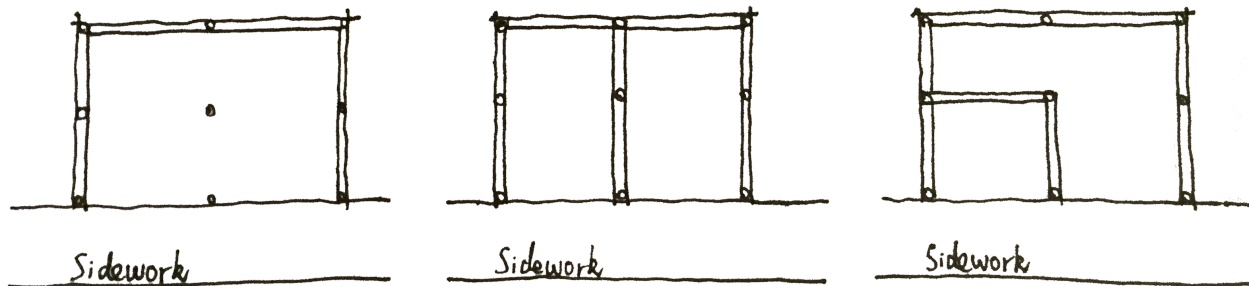


Figure 5-5 Resilience at Building Scale (plan)

- Manage intangible neighborhood character cooperatively

Pike/Pine Urban Neighborhood Council (PPUNC) is an organization that works on preserving the Pike/Pine Neighborhood unique architectural heritage. In the future, it could also extend its attention to coordinate different businesses and cultural institutions

in this neighborhood. This thinking is inspired by lesson from Odd Fellows, whose property manager carefully selected appropriate tenants for that building. PPUNC could use regulations or economic incentives to promote developments of small unique businesses and cultural institutions. For example, it could collect an “oversize fee” on oversized chain stores (like Walgreens and QFC) in this neighborhood, and take those collected fee to subsidize small businesses and cultural institutions.

## 6 Conclusion

### 6.1.1 Afterthoughts

This thesis on neighborhood character has left me with the following afterthoughts.

First, both physical and intangible elements are significant to neighborhood character, but intangible elements are not successfully recognized by policies and research. Although stakeholders have accepted architecture, use/culture, housing and diversity as important characteristics to Pike/Pine neighborhood, PPCOD and other relevant regulations are still focusing on conserving characteristic architectures with only limited focus upon use/culture. Regarding relevant studies, there has been abundant research on characteristic buildings in this neighborhood, but rarely other studies on use/culture, housing and diversity. This thesis is trying to step forward by studying both physical and intangible character in this neighborhood.

Second, compared with conservation, promotion is a more active thinking on dealing with neighborhood character. Recently, even PPCOD ordinances began to actively accommodate new development rather than focusing solely on conserving characteristic structures. In

the process of accommodating new development, we can not only conserve the most valuable neighborhood character, but also promote the built environment of the neighborhood as a whole, and improve deficient neighborhood characteristics.

Third, methodologies used in this thesis are also applicable to other neighborhoods. “Measuring distributions of neighborhood character” is a way to visualize and map different characteristics in a neighborhood, and it could also help researchers to understand several characters’ general performance. “Assessing conditions of neighborhood character” can help planners and designers to understand neighborhood character in typology and in detail, which are important references for both conservations and future developments.

### **6.1.2 Next Steps**

This thesis raises several interesting questions for further study in the future.

In the process of “measuring distributions of neighborhood character”, twelve indexes were used to represent four neighborhood characteristics. But compared with this neighborhood’s complex situations in real life, the number of indexes is still too small. It was largely limited by data source, some indexes’ dimensions were still too coarse to represent Pike/Pine neighborhood character. On the other hand, these indexes’ correlation analysis was only conducted at the elementary level, and it does not reveal deeper interrelationships between different neighborhood characters. Therefore, future researchers can improve this part of the analysis by using finer data to describe neighborhood character, and advanced statistical tools for correlation analysis.

In terms of “assessing conditions of neighborhood character”, this thesis conducted typology analysis at neighborhood level and detailed analysis at block level. But these

studies did not dig deep into architecture design, like how specific building's floor plan and façade embodied or influenced neighborhood character. In order to better instruct future development and old buildings' adaptive reuse, it is still worthwhile to do more detailed research on architecture in this neighborhood.

Pike/Pine neighborhood character has been continually changing since the neighborhood was first formed. An important issue for this neighborhood today is how to reflect its change in the past and manage new changes in the future. Therefore, from an academic perspective, it would also be interesting and useful to study Pike/Pine neighborhood character from a chronological perspective, and take the findings as references to instruct future changes.

It is unclear how the Pike/Pine neighborhood will deal with its unevenly distributed neighborhood character, conflict between conservation and new construction, and underutilized properties. Also, I am not sure whether my suggestions will ultimately be taken as reference for future policymaking and design projects. But as urban designers and researchers, we still need to keep paying attention to such urban issues, and contribute our own efforts.

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# 8 Appendix

Appendix 1: Pike/Pine Neighborhood Character Correlation Analysis

Index	Building Age	Building Stories	Building Material	Commercial, Office and Retail	Art Work and Performance Space	Bars, Restaurants and Cafes	Housing Rental Ratio	Number of Housing Units	Housing Size	Race Diversity	Income Diversity	Age Diversity
Building Age	N/A		+					-		+		
Building Stories		N/A						-		+		
Building Material	+		N/A	+	+							
Commercial, Office and Retail			+	N/A		+						
Art Work and Performance Space			+		N/A							
Bars, Restaurants and Cafes				+		N/A						
Housing Rental Ratio							N/A		+			
Number of Housing Units	-						N/A					
Housing Size							+		N/A			
Race Diversity									N/A	-		
Income Diversity										N/A	-	
Age Diversity												N/A

Non-significant relationships are shaded in white.  
 Positive relationships are shaded in yellow.  
 Negative relationships are shaded in blue.