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**[Design + Development]**  
Architectural Agency through Real Estate Development

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Abstract

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This thesis proposes that architects can have a greater impact on the built environment if they understand real estate development and assume the role of being their own client. The intent of this thesis is to explore the relationship between real estate development and architecture to gain an understanding of how the two activities can be combined to achieve projects that has both design integrity and financial robustness through a form of architectural agency. By performing a mock design-development mixed-use project on a neighborhood commercial property in Seattle, this thesis aims to demonstrate a project delivery method that optimizes design and finances.

#### ACKNOWLEDGMENTS

I would like to thank Lake Union Partners, Donald King, David Harmon, and all the professionals who advised me through the thesis process.



"Architecture should interact with the imperatives of economics and marketing but not be consumed by them. It is the role of the art of architecture is to tame the savagery of commerce."

-Andrés Duany in *"General Agreement on Architecture and Related Matters"* (2003)

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**Introduction**

Throughout history people have described architects in a variety of ways, interchangeably and simultaneously as artist, designer, master builder, tradesman, intellectual, and professional. Furthermore, the role of architects within society has been and always will be influenced by overarching political, economic, and social regimes that place competing values on the built environment. Through its many names, architects continue to hold the belief that buildings have a direct and indirect effect on society on many different socio-economic, psychological, and physiological levels. Today, architecture is one of the many services that contribute specialized knowledge to a collaborative process of getting a building constructed. The problem this thesis presents is that architectural practice has evolved to become a service dependent on other actors to initiate projects, then portioned a relatively small amount of capital for their service. The position of architecture within this economics dominated power structure does not provide any means to direct agency in changing a property's use, or influencing it's future use. Architecture, for the most part, is dependent on other professions to create opportunities, and thus is not directly responsible for positive change. Architects need a clear path to seeing their ideas come to fruition, a means of acting. For architecture to accrue influence on how our built environment evolves into the future, or even independently commission itself to act, it must understand and participate in the larger system this process operates within, the real estate industry.

The solution this thesis presents is an integrated project delivery approach, [Design + Development], in which the architect of record maintains an ownership position within a project, participating in activities typically performed by the real estate developer simultaneously with design services, then operating the design. From a theoretical standpoint, focusing on the process by which a building is created, instead of the building itself, it is clear that consolidating key services will align incentives creating efficiency and effectiveness. The architect and the developer work together more than other services to determine a building's primary look, feel, and function.

It is important for architects to acknowledge the importance of aligning interests with real estate professionals in order to solve advanced economic and environmental issues through successful design. The architectural profession will gain a sense of solidity, some degree of certainty, and certainly more stability by providing the same level of financial analysis as real estate developers as part of the design process. The architectural professional can only benefit from combining the two levels of thinking if the goal is to carry out a vision of the built environment that it now makes a positive difference. This thesis covers a description of [Design + Development], its pro and cons, people and firms who have laid the groundwork, a methodology for it, and a demonstration using the theoretical investigation as a framework. For the purposes of this thesis, an urban context will be assumed since the global trend is towards a more urbanized populace, this is where capital is being invested, and this is where architects can make the biggest impact.



## PART 1: THEORETICAL INVESTIGATION

“Architecture can never be passive and there is a strong intolerance for our profession when we cannot provide answers – or perhaps worse, when we do not even claim any answers...Faced with this huge tsunami of unknown urban substance, the most important thing that architects can do is to write new theory.”

*-Rem Koolhaas. In Search of Authenticity. The Endless City*



## Chapter 1 The Problem\_ Architectural Neutrality

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### A Regime of Complexity

Over the past century, continued liberalization of economic activity has accelerated capitalism's proliferation to a global scale, creating complex economic interdependencies that become manifested in modern society; from the simple things we spend money on, to the new stadium that is built for a sports team, nearly everything is assigned value and can be 'owned', and therefore purchased. Free market economics is the primary driver for most human activity and the buildings that architects design to house human activity are no exception. The architectural profession has fallen behind in its understanding the real estate process, and as a result is failing to see a payoff comparable to other professions with a similar amount of rigor in their professional training. As an aspiring millennial architect, it is imperative to seek ways to advance the profession into the future so that we may have a more active role in the shaping of our cities. Architectural agency is the capacity of architects to act or exert power to pursue an agenda in the world, and while practicing architecture has strong pros; passion for the profession, the ability to work creatively to solve problems, a vision to make a difference through built form; the profession's ability to have agency will continue to be crippled until a transition is made towards participating in real estate's *regime of complexity*.<sup>i</sup>

<sup>i</sup> Rem Koolhaas, "Bigness, or the Problem of the Large," OMA, Rem Koolhaas, and Bruce Man, S, M, L, XL (New York, 1995)

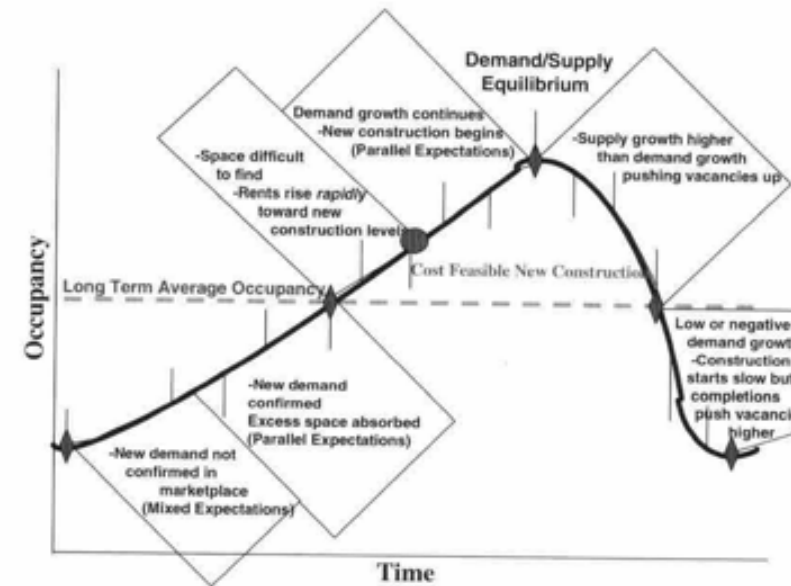
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Rem Koolhaas alludes to the commercial real estate industry when he writes about BIGNESS in his 1995 publication "Bigness, or the Problem of Large" when he describes that "only BIGNESS instigates the regime of complexity that mobilizes the full intelligence of architecture and its related fields." BIGNESS, he defines, is the politics and capital driving urbanization across the globe versus the architect, and architecture's position relative to its existence. He insists that the absence of a theory of BIGNESS is architecture's most debilitating weakness. BIGNESS recognizes that architecture, as we know it, is in difficulty', and instead of overcompensating to correct for the difficulty BIGNESS is proposing a new economy in which architecture retreats and concentrates, 'yielding the rest of a contested territory to enemy forces.'<sup>i</sup> The commercial real estate market, nearly all the space and property making up our urban context, is the territory Koolhaas is alluding to. Left unchecked, the commercial real estate industry is a force that cares little about the manner in which urban development impacts the existing social, cultural, and contextual fabric architects are trained to engage with. Urban inequalities are a very real and serious problem that is a result of uneven urban development patterns reflected both physically in the built environment and socially in the stratification of communities. Capitalism can never achieve the equilibrium between production and consumption of which it is designed because if the continuous evolution of human demographics, technology, culture, and politics. In this free market environment where there exists a constant search for new markets and opportunities, dynamism and instability manifests itself as uneven geographical development.

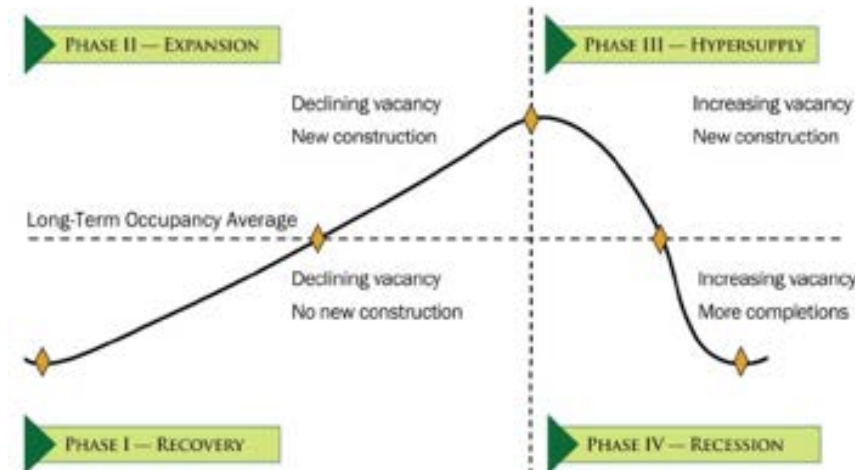
<sup>i</sup> Rem Koolhaas, "Bigness, or the Problem of the Large," OMA, Rem Koolhaas, and Bruce Man, S, M, L, XL (New York, 1995)

The need to reinvest surplus capital is one of the reasons that investing in real estate and urban development is a major practice within capital markets. Like all markets, real estate is driven by the basic economic principle of supply and demand. The basic theory is strait forward, but within the real estate market a few major differentiation appear. Real Estate cycles are prolonged periods of property supply and demand imbalance that were first discussed by Homer Hoyt in 1933 in his analysis of the Chicago marketplace. Since his time, a plethora of literature has been written on the subject. Supply mostly lags behind demand due to the time it takes to construct a buildings, i.e. demand may change in the time it takes to design and build a project. This is called inelasticity of supply and means that supply is slow to respond, thus lagging behind demand. Inelasticity creates an environment where equilibrium rarely exists. Real Estate cycles play out slowly due to the typical slow nature of demand growth, leases, and fixity of supply. G.R. Mueller and S. H. Grenadier developed the most widely used models that characterize real estate cycles. Mueller developed Physical Market Cycle Theory are a function of the markets position in the physical real estate phase.

Physical Market Cycle Characteristics



Market Cycle Quadrants



Source: Mueller, Real Estate Finance, 1995.

Real Estate Cycles are extremely important because they begin to explain the economic context in which buildings become attractive investment opportunities, fueling the real estate industry, and ultimately the demand for architectural services. Despite the fluctuations real estate cycles and market values, like the sub-prime mortgage crisis, and widespread speculation, the general perception is that investing in real estate is a relatively safe investment because of its high correlation with inflation. Over the past century the real estate market have gone through both booms and busts, but the year over year increase in value of real estate properties average out to about the same as general inflation, 3%.

While the general approach for the free-market to reign supreme in the real estate market has prevailed, more than one force is at play as demonstrated by certain interventionist strategies. For example, large private industrial firms in the early part of the twentieth century intervened in the real estate market on behalf of their employees by providing affordable housing.<sup>i</sup> A more contemporary example might be large tech companies offering free transportation to employees so that they can choose to live where they want, like near amenities. This shows that capitalism encourages competition within certain industries, like commercial real estate, but also across different industry sectors who compete for labor, material, land, intellectual property.<sup>ii</sup>

<sup>i</sup> Peter Marcuse, "Do Cities Have a Future", The Imperiled Economy: Through the Safety Net, New York: Union of Radical Political Economists, 1988, pp. 189-200  
<sup>ii</sup> Kaminer, Tahl. Urban Asymmetries: Studies and Projects on Neoliberal Urbanization. Rotterdam: 010, 2010. 10-15. Print.

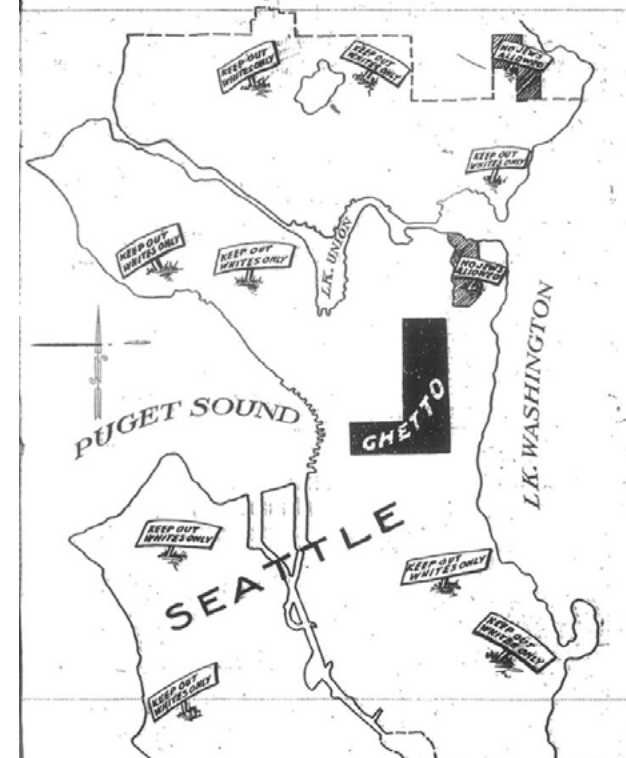
Before the neo-liberalism became the primary economic system, interventionist strategies in the real estate market were primarily a function of the state, who took responsibility for planning, financing, and construction of buildings that served the low income groups in society. The failure rate of state driven urban development in the US may have changed the political sentiment to shift this responsibility to private entities, however, the recent attention and debate surrounding affordability and quality of life in Seattle suggests that yet another reexamination of urban real estate development is needed.

Uneven geographical development is a phenomenon that is highly visible in cities around the world. When we understand how to perceive buildings as investment entities, through this lens, cities are places where global capital gets crystallized into built form. Because of a cities are physical spaces, uneven urban development is most visible in the real estate market as the disparity of property values in different parts of the city drives a constant attempt to devalue land in order to be able to buy it cheap, and subsequent attempts of developers and municipal officials to raise the real estate value through regulations, investments, and incentives.<sup>i</sup> In extreme cases, the neoliberal market forces causes both private and state interests to align interests in measuring value by a single yard stick: the production of surplus profit.

The images on the right show different forms of uneven urban development. Top right is a sort of physical manifestation, bottom right is a political manifestation.



This New World Map Shows Seattle's "Ghetto"

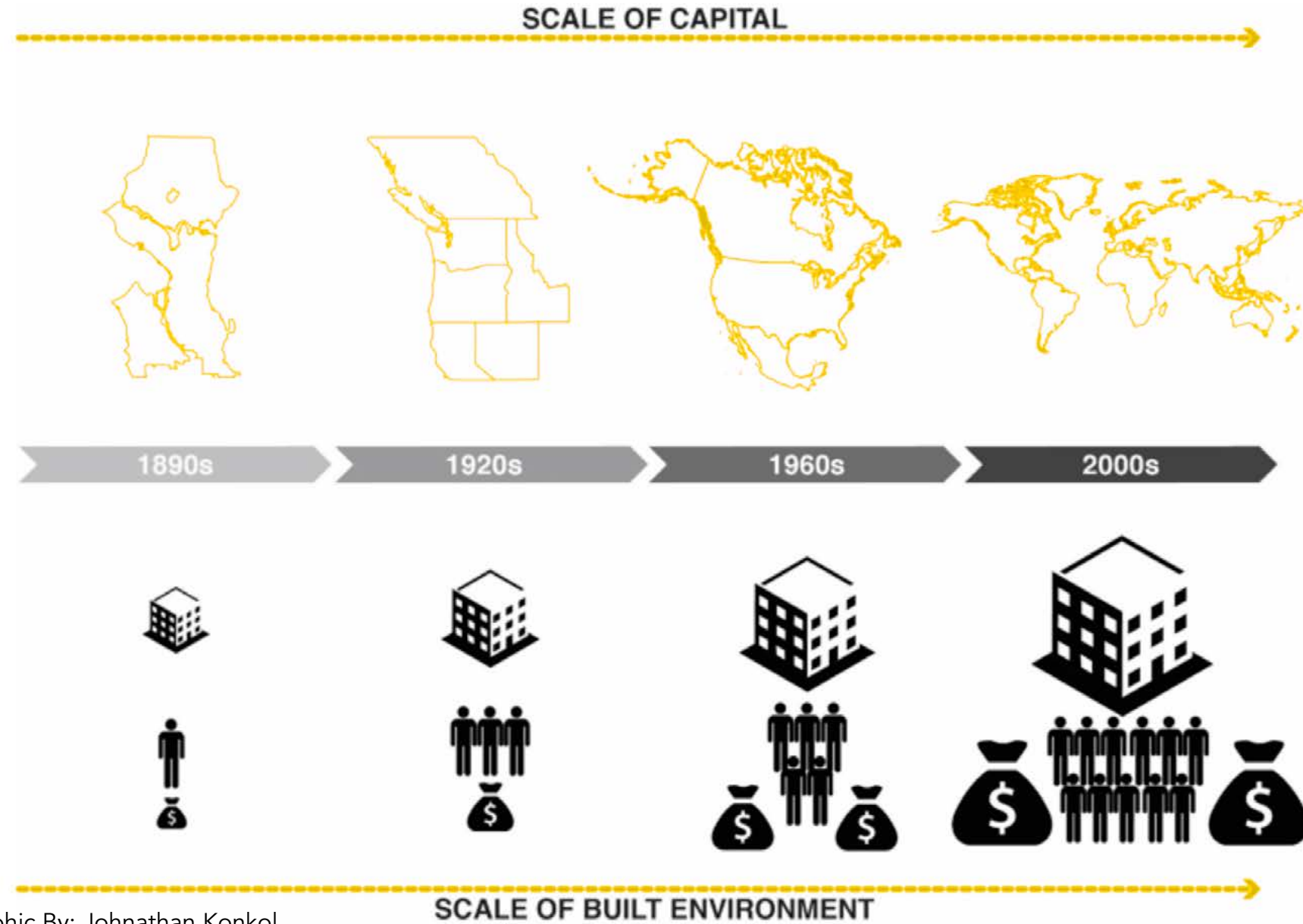


<sup>i</sup> Kaminer, Tahl. Urban Asymmetries: Studies and Projects on Neoliberal Urbanization. Rotterdam: 010, 2010. 10-15. Print.

Urban development patterns like [fig. x] is in part the effect of unrestricted capital investment, often the result of poor planning policies by state governments, bureaucracies that are impeding, and private businesses who are opportunistic enough to take advantage of a broken system. The fundamentals of what drives purely economic urban develop stretches across national borders and occurs in a variety of economic and political settings: the absence of history and the human subject. Social movements, economic changes, community fabric, tradition, political decisions, and imagination, all of which construct the city, becomes invisible.<sup>i</sup>

To further examine this critique on the effects of capital in urban development in North America, we will join my contemporary, Jonathan Konkol, in examining a correlation between the scale of capital and the scale of its spatial manifestation. Economies of scale in real estate development means that larger projects drive down overall cost, creating larger returns for projects that are larger in scale. Institutional capital, such as real estate investment trusts, pension funds, and private equity funds seek investments "worth their time" in terms of their size. The image on the following page shows how the progression of economic liberalization over the past century has created the increasing ability to pool large amounts of capital which in turn result in the demand for larger and larger projects. This is not necessarily a bad thing unless the project does not consider the effects its externalities will have on the existing culture and urban fabric. While there are many things that could go wrong with large investments, many negative impact they have on communities can be mitigated by employing a design development method.

<sup>i</sup> Kaminer, Tahl. Urban Asymmetries: Studies and Projects on Neoliberal Urbanization. Rotterdam: 010, 2010. 10-15. Print.



Graphic By: Johnathan Konkol

Many housing developments have become ubiquitous in the city as a result of a 'formula' that is pushed on the development process by capital sources to produce a products aimed at the top echelon of the populace in an aim to produce the highest surplus at the lowest risk. This process treats the architect as a means to an end, not a part of the process in creating the project vision. As a result,architects have little leverage in the process and homogeneity of both form and material use becomes the norm in Seattle, becoming a place where you know exactly what will be being built even before you start. In Seattle, the dramatic images of urban inequality are harder to find. Instead the effects of uneven urban development are subtle as new housing slowly pushes people who don't making a certain wage further out from the core into areas with unacceptable commuting distances from sources of employment. This, needless to say is good for the larger economy and for the "elite", but proves disastrous to the small household economies.<sup>i</sup> Often times these capital sources employ out of town developers who care little for the notion of place. Sometimes these developers are backed by a significant amount of capital being invested by institutional investors. This sort of formula driven "band-wagon" development creates (assumed) unintended externalities, such as the loss of granularity that Konkol explains, in addition to the issues this thesis'. [Design + Development] agency will seek to address economic displacement by combining setting clear design and development goals before a project is started that are based on any specific locations market and cultural needs.

<sup>i</sup> Kaminer, Tahl. Urban Asymmetries: Studies and Projects on Neoliberal Urbanization. Rotterdam: 010, 2010. 10-15. Print.

**Working to Live in Seattle**

The conversation surrounding Seattle’s explosive growth has no doubt been focused on the influx of tech industry workers into the region and the effects of this in-migration on affordability and equity. Hundreds of articles, reports, blog posts, and opinion pieces have been written about who or what is responsible for the decrease in housing affordability, and what can be done to mitigate this reality. When you look through the conversations, both in cahoots and contention, one thing is clear: people who work certain jobs and make a certain income will not be able to affordably live in Seattle or any of its neighborhoods adjacent to downtown, including the Central District, the neighborhood where the design part of this thesis is focused. The ability for a development project to coordinate existing residents, new comers, and visitors is key to its success in cities today. By employing creative programming that is backed by markets analysis and demographic trends, it is possible to design and develop dynamic spaces that attract and retain people of many backgrounds and cultures. Currently, there is a problem with gentrification that is a result of a broken system. Many residents are being forced out of the neighborhood they grew up in because of this systematic failure. To be specific about who exactly is being priced out of the city, I examine data from the U.S. Bureau of Labor Statistics, U.S. Department of Commerce, and the U.S Census Bureau to determine which occupations are overpaying in rent. The intent is to show that affordability is linked to wages, and the majority of the jobs in the city, filled by people we know personally who might be close friends or family, do not get paid enough to allow for affordable living in many of Seattle’s neighborhoods.

**Affordability By Occupation Seattle Area Wages in Central District**

Occupation	Seattle Area Hourly Wage	Seattle Annual Salary based on 1700hrs	Mo. Housing Capacity	Avg. Central Area Rent	Overspending?
Cooks	\$10.45	\$17,765	\$494.46	\$1,681.25	-\$1,186.79
Personal care aides	\$11.42	\$19,414	\$540.36	\$1,681.25	-\$1,140.89
Cashiers	\$13.22	\$22,474	\$625.53	\$1,681.25	-\$1,055.72
Retail sales person	\$14.41	\$24,497	\$681.83	\$1,681.25	-\$999.42
Construction laborers	\$20.77	\$35,309	\$982.77	\$1,681.25	-\$698.48
Roofers	\$22.78	\$38,726	\$1,077.87	\$1,681.25	-\$603.38
Mechanical drafters	\$35.97	\$61,149	\$1,701.98	\$1,681.25	\$20.73
Accountants and auditors	\$36.75	\$62,475	\$1,738.89	\$1,681.25	\$57.64
Logisticians	\$38.31	\$65,127	\$1,812.70	\$1,681.25	\$131.45
Registered nurses	\$38.77	\$65,909	\$1,834.47	\$1,681.25	\$153.22
Aerospace engineers	\$50.76	\$86,292	\$2,401.79	\$1,681.25	\$720.54
Computer programmers	\$55.15	\$93,755	\$2,609.51	\$1,681.25	\$928.26
<b>Total Averages, All</b>	<b>\$26.76</b>	<b>\$32,815.07</b>	<b>\$1,369.34</b>	<b>\$1,681.25</b>	<b>-\$253.15</b>

US Bureau of Labor Statistics

**Who is being priced out?**

The help. Non-Basic jobs that support the economic base who brings money into the region.

- Personal Care and Service Occupations
- Healthcare Support Occupations
- Building and Grounds Cleaning and Maintenance
- Customer Service Representatives
- Delivery Service Drivers
- Materials Handlers and Movers

I will cover the definition of “affordability”, trends in housing across the US, and income statistics in Seattle as they relate to housing expenditure. When people speak about “affordability” it may not be clear what metric they are using to determine this claim. Affordability as defined in this post will be based on the U.S. Bureau of Labor Statistics USA average annual housing expenditure as a total percentage of annual income. For 2014 the average household expenditure was 33.60%. This is the benchmark for affordability. When a household is paying more than 33.6% on housing expenditures, they are overpaying.

USA Average Annual Housing Expenditure (% of Annual Income)						
Total	1 Person	2 or More Persons				
		All	2 Persons	3 Persons	4 Persons	5 Persons
33.60%	37.60%	32.70%	32.50%	32.30%	33.00%	33.20%

US Bureau of Labor Statistics

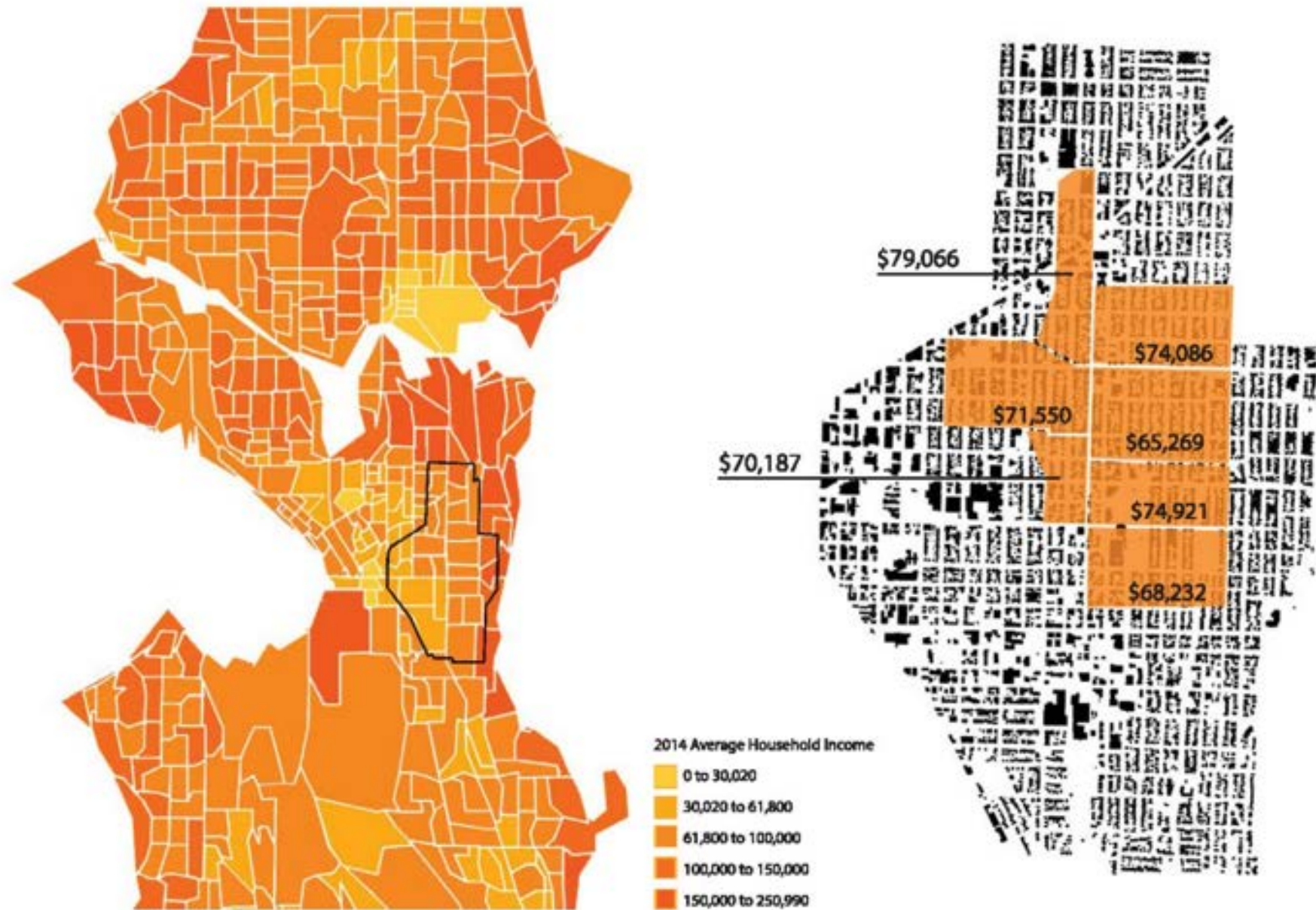
Like most cities across the nation, more people in Seattle are living in rental housing since the sub-prime mortgage crisis stifled the economy and sapped mortgage lending. Homeownership rates are at their lowest point in more than 20 years settling at 64% at the end of the fourth quarter 2014 (US Census). Homeownership has many benefits that help to mitigate the net loss that is housing expenditure, primarily the fact that each payment is essentially a form of forced savings. When more people are renting and less people are buying homes, more people are susceptible to the rising costs associated with a housing bubble. Seattle’s home ownership rate is 46.23%.<sup>i</sup>

<sup>i</sup> <http://www.seattle.gov/dpd/cityplanning/populationdemographics/aboutseattle/housing/default.htm>

Housing affordability starts with income. The graphic on the following page shows average household income in Seattle and samples a region of Seattle’s Central District. When wages remain stagnant as rents rise, people working certain occupations are left with little or no money to spend on other goods and services. They move to make room for people who can afford to live in environments with inflated rent. There is no doubt that the number of high paying jobs in Seattle is growing, and when high-paying jobs increase, so do the support jobs that accompany them. Based on the data collected by the U.S. government, we can reveal which occupations are getting priced out of Seattle.

The chart on the following page takes data from the U.S. Bureau of Labor Statistics, on total employment by occupation in the Seattle Metropolitan Statistical Area (MSA), to determine what people working in the regions most common jobs should be spending monthly on their housing expenditure. Average housing expenditure is 33.6% of the occupations annual mean wage. In the United States, a metropolitan statistical area (MSA) is a geographical region with a relatively high population density at its core and close economic ties throughout the area (Wikipedia). Employment RSE is relative standard error. Location Quotient is the degree in which these jobs bring in money from outside the local economy, with a higher number indicating a net export of a particular service. Jobs highlighted in orange are overpaying in rent according to Q4 2014 Seattle’s average rent for the Central District: \$1,681

### 2014 Average Household Income Central District Neighborhood



US Bureau of Labor Statistics and Esri BAO



AVA Ballard



Othello Station North



Legacy at Pratt Park

In the Central District, cooks, personal care aides, cashiers, and retail salespeople are overpaying in rent by \$1000 or more. According to the Bureau of Labor Statistics, people working just these types of jobs account for nearly 10% of the jobs per 1000 within the Seattle MSA. The key finding here is that a large percentage of people working certain occupations are not getting paid enough to cover the average rent in Seattle, overpaying in monthly housing expenditure, and as a result are unable to do things(spend money) that they otherwise would. The next time you go buy something at the mall, a local store, or go eat at a restaurant, keep in mind that the person helping you spend your money is “living to work” in Seattle not “working to live”. Housing development that are built with the intent of maximizing rent across all units with little consideration of the stratified income reflective of the communities they are built in fail to address a key social aspect. Homogenized and out of scale, these development threaten the vibrancy of neighborhoods, and potentially the vibrancy of their financial returns. The development on the left are local examples of typical large scale developments.

By looking at housing affordability from the perspective of income generation through wages or occupational salaries, we can get an idea of who is losing during this time of economic growth and work to design and develop real estate that fosters a more holistic community. How to design and develop for everyone on the list on the following page is one of the key question that faces Seattle, and many other cities in the country.

### Seattle MSA Top Occupations and Annual Salary (BLS)

Occupation	Employment	Employment RSE	Employment per 1,000 jobs	Location quotient	Mean hourly wage	Annual mean wage	Average Annual Housing Expenditure	Monthly Housing Budget
Retail Salespersons	57,150	3.10%	33.394	0.99	\$14.43	\$30,010	\$10,083	\$840
Software Developers, Applications	48,990	1.90%	28.627	5.9	\$54.20	\$112,740	\$37,881	\$3,157
Cashiers	33,190	6.10%	19.394	0.77	\$13.22	\$27,500	\$9,240	\$770
Combined Food Preparation and Serving Workers, Including Fast Food	30,040	7.80%	17.556	0.77	\$10.76	\$22,370	\$7,516	\$626
Registered Nurses	29,110	6.00%	17.008	0.85	\$38.77	\$80,640	\$27,095	\$2,258
Customer Service Representatives	26,930	4.50%	15.738	0.87	\$18.10	\$37,640	\$12,647	\$1,054
Laborers and Freight, Stock, and Material Movers, Hand	26,430	5.10%	15.442	0.9	\$16.05	\$33,380	\$11,216	\$935
Waiters and Waitresses	26,060	4.80%	15.227	0.84	\$13.93	\$28,980	\$9,737	\$811
Bookkeeping, Accounting, and Auditing Clerks	21,290	3.30%	12.44	1.04	\$20.16	\$41,940	\$14,092	\$1,174
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	19,740	5.50%	11.536	0.73	\$14.48	\$30,130	\$10,124	\$844
Teacher Assistants	15,470	3.10%	9.041	1.01	-4	\$32,610	\$10,957	\$913
Computer Programmers	14,400	3.40%	8.413	3.57	\$55.15	\$114,710	\$38,543	\$3,212
Cooks, Restaurant	14,390	6.90%	8.409	1.05	\$12.69	\$26,400	\$8,870	\$739
Personal Care Aides	12,760	8.30%	7.455	0.87	\$11.42	\$23,760	\$7,983	\$665
Nursing Assistants	12,020	5.40%	7.022	0.65	\$14.78	\$30,740	\$10,329	\$861
Computer Systems Analysts	11,780	6.20%	6.886	1.8	\$47.73	\$99,290	\$33,361	\$2,780
Carpenters	11,770	8.70%	6.878	1.57	\$24.85	\$51,700	\$17,371	\$1,448
Market Research Analysts and Marketing Specialists	11,380	3.90%	6.648	2.05	\$39.83	\$82,850	\$27,838	\$2,320
Management Analysts	11,190	4.10%	6.54	1.53	\$47.74	\$99,300	\$33,365	\$2,780
Bartenders	8,550	10.50%	4.995	1.19	\$13.75	\$28,600	\$9,610	\$801
Lawyers	8,510	4.80%	4.97	1.11	\$61.34	\$127,590	\$42,870	\$3,573
Aerospace Engineers	8,060	6.00%	4.712	8.74	\$50.76	\$105,590	\$35,478	\$2,957
Civil Engineers	6,790	6.30%	3.969	2.01	\$41.39	\$86,090	\$28,926	\$2,411
Logisticians	5,440	2.60%	3.18	3.5	\$38.31	\$79,680	\$26,772	\$2,231
Industrial Engineers	5,110	7.20%	2.984	1.72	\$43.86	\$91,230	\$30,653	\$2,554

Indicates spending above national average for housing costs.

### Confronting Conflict with a New Strategy

Architectural services involves a high level of interdisciplinary synthesis and problem solving, understanding buildings on a technical and social level with keen eye on all levels of context. But at the end of the day architecture is a response to constraints with one in particular that presides over every architecture practice: collaborating design intent with capital forces. The problem involves confronting conflicting perspectives of what a building is: a financial investments the existing within a real estate market on one end, and environments for people that exist within an urban fabric on the other. Infusing the real estate development process into an architecture firm's practice would provide an array of advantages, including a validation of its architecture through cost analysis and financing, an ownership position of their design work, and most importantly a form of agency. [Design + Development] is an integrated project delivery approach in which architecture and development services are integrated into one business entity and practice that collaboratively works with a prime contractor to get buildings built. This thesis presents an architectural design proposal for a mixed -use mixed-income project that also includes a real estate development investment report.



## Chapter 2 Solution\_ [Design + Development]

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### Architecture and Commerce

The most prominent and unfortunately true reputation architects have among real estate professionals is that they are inconsiderate of budgets. Many in the real estate industry view architects as a stepchild in the building process because they are not fully in touch with the capital required for a building project.<sup>i</sup> While this is a crude generalization, it is a notion that is both the product of and reason why architecture as a practice has lost much of its control in the building process, which adheres to “the golden rule.” The golden rule as most people know it is a maxim about the ethic of reciprocity, “do unto others as you would have them do unto you,”<sup>ii</sup> but in real estate, the golden rule has little to do with this two-way concept. The golden rule in real estate is “he who has the gold, makes the rules,” and while the developer may not possess all the “gold” to finance the whole project, they make the rules because they are responsible for employing it.<sup>iii</sup>

Architects are in a position that relegates them in many of the key decisions in a development project because of the lack of financial understanding of a building project. This is particularly surprising because of the value proposition that design brings to the table during the development process. Influencing everything from the cost of construction to the price paid for space, architecture is the vision that dictates the development process. Why are architects choosing to ignore the importance of commerce in design?

<sup>i</sup> Miller, Ben. Co-founder of Fundrise.com interview

<sup>ii</sup> Antony Flew, ed. (1979). “golden rule”. A Dictionary of Philosophy. London

<sup>iii</sup> Johnathan Segal, “Architect as Developer,” 2007

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Ideas and creative freedom in architecture school embodies a spirit of social problem solving through the practice of building form. Its focus is on how to make buildings is manifested through a design process that involves organizing all of a building’s systems in a way that curates social activities. But underneath all the vibrant skills learned through this pedagogy, ambitious projects students conceive rarely are made into real projects. Perhaps if architecture can incorporate project finance or business skills as a part of their design process from the very beginning of their architectural training, they would be in a better position to organize, manage, and assume the risks of seeing their vision come to life.

A key concept throughout this thesis is the ability to align goals and coordinate with other key individuals from the very beginning of the building process. Establishing a method or mind frame to coordinate with counterparts, who all learn how to manage financing as a core competency, can aid in working to bring imagination to reality. Unfortunately the failure to recognize the importance of project finance as an integral part of the design education has pushed the responsibility upon firms, who often times choose not to incorporate this skill into their training.

“During this century, as architecture knowledge grew more complex, the apprenticeship system withered away and schools assumed much of the responsibility for preparing architects for practice. However, schools cannot do the whole job. It is widely acknowledged that certain kinds of technical and practical knowledge are best learned in the workplace itself, under the guidance of experienced professionals.”

—*Building Community: A New Future for Architecture Education and Practice, 1996*

This thesis advocates for the practice of architecture to integrate real estate development as a part of its core competency as way to begin an investigation of how to better coordinate bringing a vision to life. The big idea being that architects will achieve a path to direct agency in the BIGNESS, gaining a sense of autonomy through aligning interest, and ultimately having a greater impact on the future of our cities.

Urban land economics investigates the interaction between local urban economies and its tight link to land value and land use. Buildings are a means of providing usefulness to land, which in turn creates value. Buildings become improvements within urban space market with a tremendous amount of value, as reflected in the massive amount of capital needed for projects to be constructed. Because buildings are so capital intensive, their development is driven by the connection between capital and physical markets. When people demand physical space, capital is needed to finance the materials and activities to provide this space. Buildings then are economic entities that are enhanced by well-conceived design.<sup>i</sup>

### **Working within a Capital Driven System**

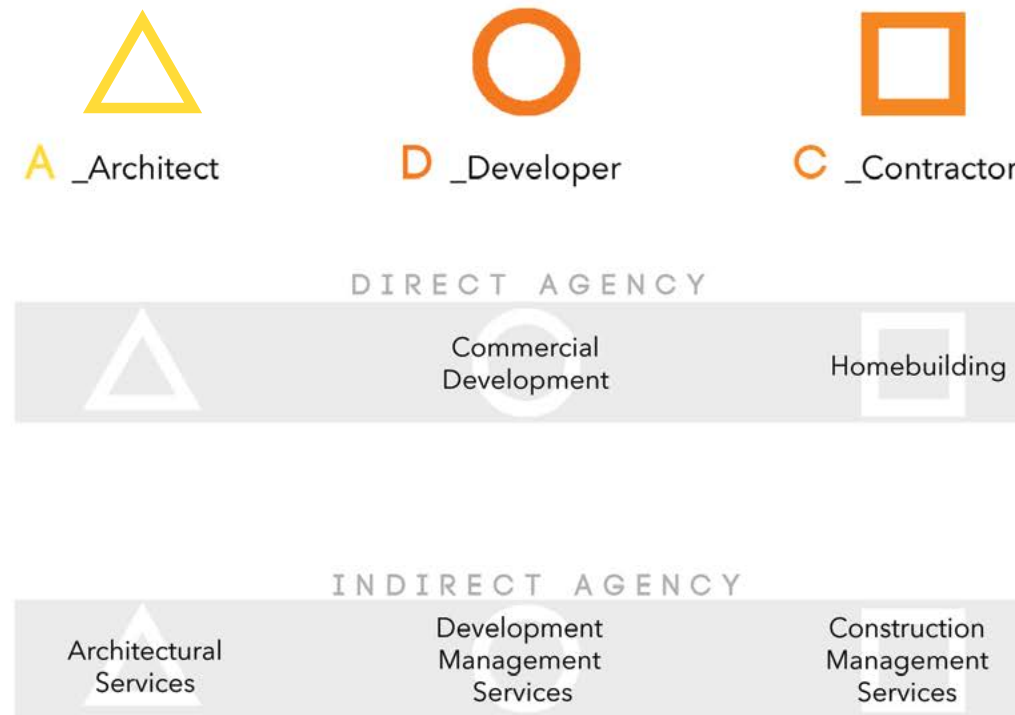
Architects typically work under the direction of an 'owner' or 'real estate developer' to deliver their primary contribution, drawings containing a building's design, to a contractor who then constructs the plans. This relationship between the architect, developer, and contractor during the entire development process is extremely important. The ability for an architect to assert design quality (reflected as a percentage fee) into a project depends largely on how much the developer believes in the value of design. The ability for a contractor to assert construction quality (reflected in the total cost of construction) into the project depends on what the developer believes the market will value. By possessing the entrepreneurial skills typically maintained by the developer, architects can assume a more strategic position, taking responsibility and control over their designs through a better understanding of how to communicate their architecture financially.

Architects' new strategic position might succeed in advocating for the value of design to capital sources if diligence is paid to keeping metrics on the value design brings into a project. That cannot be done without understanding project finance. After all, if a design doesn't make money (on paper), it won't get build, and if architectural ideas don't get built, there is no way to direct way to create positive change. Pairing credibility and vision, architects can develop the value proposition of a project that is financially considerate and possesses design integrity.

**Participating Directly in the Market**

Developers seek investor who believe in a vision (almost always depicted by an architect) and in exchange for funding will obtain fiduciary responsibility to investors to generate a return on their capital investment (economic driver) while managing the process to build the vision. Developers can act as entrepreneurs in the market by participating directly with the institutions that allow the market to function, investors with capital. Builders also participate directly with the market through the large homebuilding industry. Architects are missing a method for direct speculative development.

It is my belief that architects should seek to understand and participate in the economic decisions of their projects, better allowing them to lead cities into the future. Demonstrating knowledge of their project's finance will gain them leverage in advocating on behalf of design while better guiding their design decision from the onset. Furthermore, architects open the door to participating in the economic benefits of owning the actual building they conceive, not just the drawing.



**Achieving Architectural Agency**

The relationship between architects and real estate developers is a story of animosity, as developers tend to be very suspicious of architects because they think they are artists who just want to create an object to put their name on. At the same time, architects think developers fail to see the real value of architecture, showing minimal interest in design solutions and just out to make money. When the two work as separate entities, an architect will feel more like a project manager than an architect. A fragmented project delivery method keeps information proprietary, and makes every party reluctant to share key information and ideas. The quality of the finished building is often a direct reflection of the quality of communication between the architect, contractor, and developer. [Design + Development] is an integrated project delivery approach in which the architect of record maintains an ownership position within a project, taking on activities typically performed by the real estate developer, in addition to design services, essentially aligning interests in producing an economically and environmentally successful design. Instead of the usual adversarial triangle of architect, owner, builder, a [Design + Development] project delivery team is made more nimble by eliminating vertical hierarchy and shifting to a horizontal organization structure that involves just two primary two entities. The following page shows the advantages of having a consolidated project delivery method over the traditional fragmented project delivery method.



**[Design + Development]** A Prospective Project Delivery Method

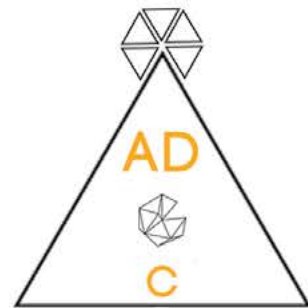
PHASE

DIAGRAM KEY

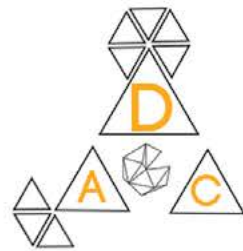
- A \_Architect
- D \_Developer
- C \_Contractor
- T \_Tenant
- △ \_Service
-  \_Project Idea
-  \_Built Project

Design + Development project delivery method

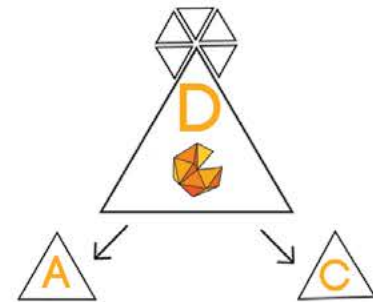
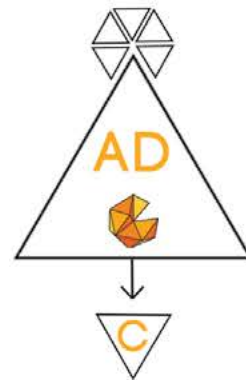
PLANNING  
ANALYSIS  
DESIGN  
DEVELOPMENT



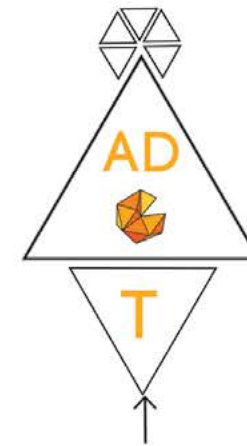
Industry Standard project delivery method



MARKETING  
LEASE UP



OPERATIONS



**Taking on Real Estate Development**

Real estate development is a processes of changing the intensity of and use of property in order to accommodate new and different uses, and by doing so creating increased economic value.<sup>1</sup> Because design is just one layer in the process of getting a building built, understanding the entire life of a building, from conception through construction to operations, architects could gain a higher understanding of how to approach building the better cities. Project finance tools like a proforma, sources and uses schedules, and cash flow modeling can allow the architect to participate in conversations about how their design decisions will affect a project's assumed monetary value. The general steps in the real estate development process include:

1. Identifying opportunities in the real estate market for developing sites to their highest and best use
2. Modeling financial feasibility
3. Designing the building
4. Securing financing
5. Constructing the design
6. Operating or selling the project.

<sup>1</sup> Rolfe, 1998

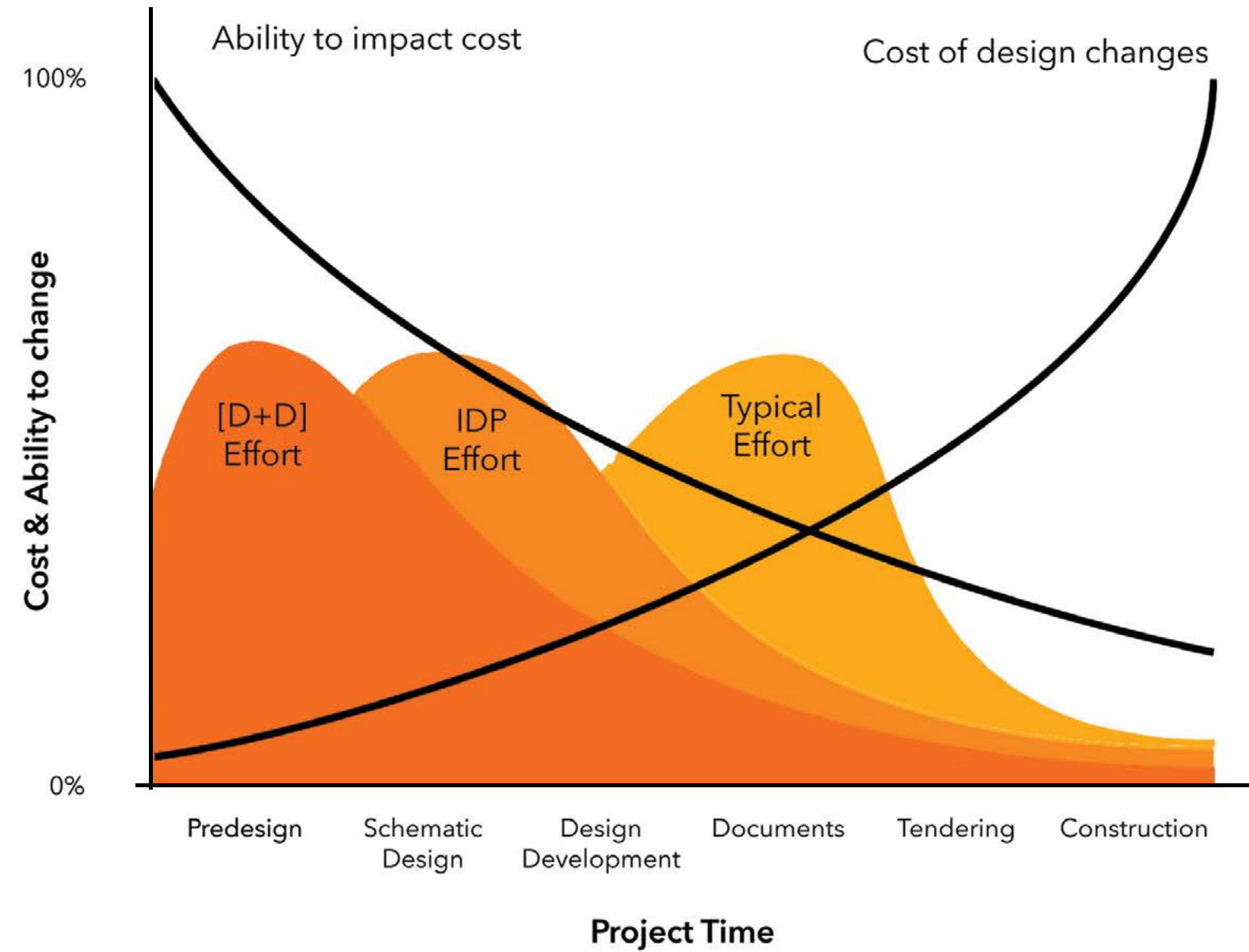
This seems like a lot to juggle, and it very much is, but the idea is not far-fetched when you consider the embedded knowledge architects have about the social aspects of a space and time, and it is possible to see how they can have great insight in identifying opportunities during the market analysis phase. We will cover a hypothesis on how to integrate design and development processes in the following chapter. In assuming the role of developer, architects are essentially becoming a real estate professional in addition to an architect.

This approach challenges current project delivery methods by creating a situation where a conflict of interest may arise. This should not be a reason to detour. The idea of architects developing their own property summons a vision of cities that are chock full of quality-designed projects that challenge conventional ideas about the possibilities within the built environment. Architecture as taught in the university is concept driven, socially beneficial, and environmentally resilient. No other professionals in the building industry require the broad base of knowledge about how a building is designed and operated than architects, which positions them one step away from having complete control over their ideas, vision, and imagination: managing the financial side of buildings.

### **What is a value proposition?**

From a consumer standpoint in capitalist society, a value proposition is simply a statement that summarizes why one particular product or service will add more value or better solve a problem than other similar offerings. Looking at architecture, as it exists today, is it possible to change the culture and mentality developed over decades of diligent, yet miscalculated, focus on the form and space while ignoring economics. One possible solution is to recognize the profession's strengths and "add fuel to the fire." A path exists for architects who want to take control of their profession and design what they truly believe will make a difference. Ben Miller, co-founder of Fundrise.com, said in an interview that this duality can make a difference in buildings communities and an architect/real estate professional mentality will allow for this. Architects acting as their own developers have the chance to take control of their practices because they, more than any other professional in the real estate industry, understand urban environments and the value proposition design brings to realizing better environments for people while driving down cost in the project delivery schedule as illustrated on the following page. Without a doubt, architects possess the vision for engaging in real estate development projects, all they need is fiscal credibility to have the equity backing to design their own projects.

[Design + Development] A Prospective Project Delivery Method



Chapter 3 Methodology\_ The Design Development Process

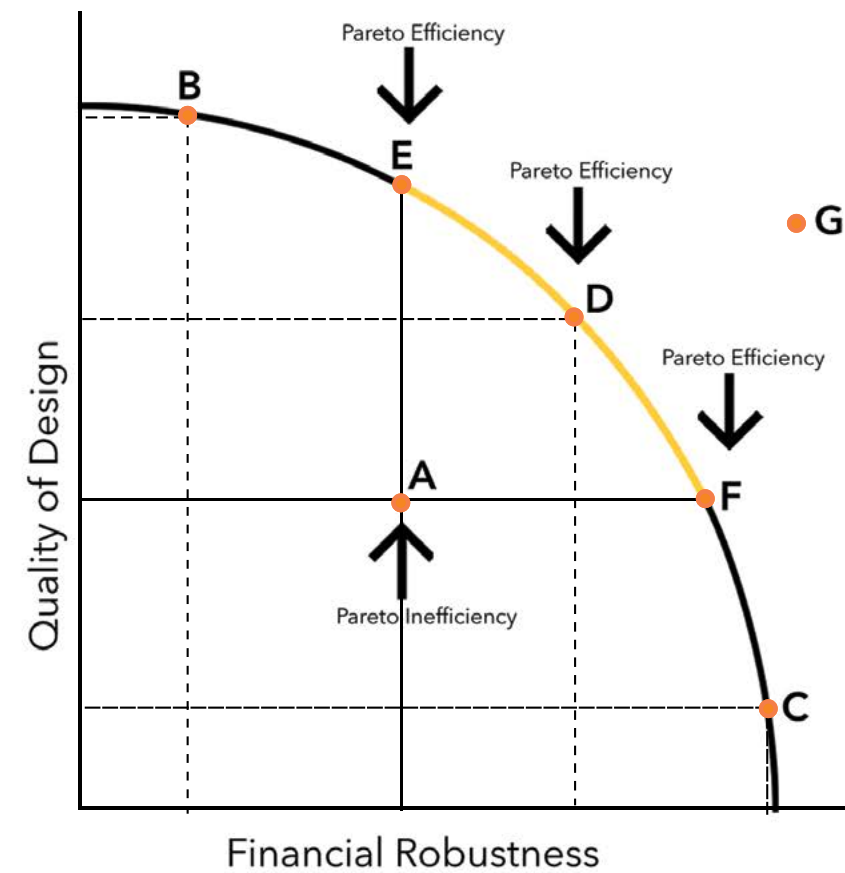
Optimality

The methodology section of this thesis looks to microeconomic and game theory to explain the advantages of combining architecture and development into delivery method. When looking at complicated economic products, such as buildings, there is often times multiple specialized services and knowledge bases that need to coordinate for the product to come to fruition. The manner and method in which these “agents” share information during the process of creation is of paramount importance. Concentrating on the process that produces a product instead of the product itself sheds light on interesting theory about how to improve the efficiency and quality. To begin, we will look at the concept of Pareto Optimality. Pareto optimality describes a state of affair in which resources are distributed such that it is not possible to improve a single individual without causing at least one other individual to become worse off than before the change.<sup>i</sup> Named after Vilfredo Pareto, an Italian economist who contributed significant work to the study of microeconomics, Pareto optimality has implications in economics, particularly in game theory. The term is often introduced in MBA negotiations courses to describe the best possible outcome for an allocation decision, given a limited amount of resources effectively without causing harm to any one participant. This state of “non-harm” is known as Pareto optimality.

<sup>i</sup> <http://www.economyprofessor.com/pareto-optimality-1906>

This diagram shows the production possibilities frontier curve for the production of a new building with architecture interests represented on the x-axis as “design quality” and developers interest represented on the y-axis as “financial robustness”. Point “A” lies below the curve, denoting underutilized production capacity, point “G” lies outside of the curve, representing an impossible outcome for existing capital and/or technology. Points “B”, “E”, “D”, “F”, and “C” lie on the curve, denoting efficient utilization of production, meaning by increasing one variable without reducing the output of the other variable. This condition (being on the curve) is called Pareto efficiency and any point on BC represents a set of initial allocation of resources.<sup>i</sup>

When a set of initial allocations makes one individual better off while not making the other worse off, it is called Pareto improvement. A good example of Pareto improvements is eminent domain. If a house sits on a piece of land that would serve society through being converted to light rail, the land could be taken away. Initially individuals would be worse off as they lose their home and property as other individuals are made better off as they gain a new rail system that will speed up transportation and bring urban center jobs closer to more people.



<sup>i</sup> Stanley Feld M.D.,FACP,MACE

A Pareto improvement alternative would be compensating the homeowners for the land, where those who will now benefit from the light rail are made better off, but the individuals losing the home will not be made worse off.

When all of the other allocation alternatives have been exhausted, and no other Pareto improvements can be made, the allocation is deemed Pareto Optimal. Achieving true Pareto efficiency/optimality is unlikely to be achieved in reality because of rigidities and imperfections, like external factors, but the concept is still a useful for two reasons:

1. It can be an objective for an industry because it set a direction towards which it can move.
2. It demonstrates that the most efficient systems are created when everyone's vested interests are aligned.

Opportunity cost can be thought of in terms of how decisions to increase the value of design by an extra marginal unit leads to a decrease in the financial robustness. Because of the opportunity cost, temptation is to not be truthful in order to maintain dominance at the expense of others.<sup>i</sup> The idea of Pareto Optimality is most heavily used in political economy because social benefit, or “value” cannot always be defined by qualitative representation.

<sup>i</sup> Stanley Feld M.D.,FACP,MACE

**How to Manage Complex Systems**

The commercial real estate industry is a complex system, or to conjure Koolhas, a regime of complexity. Complex systems are a result of interaction between experiential learning system and complicated learning system. Complicated learning systems are created by technological and scientific innovation.<sup>i</sup> Learning to manage the interaction effectively results in efficiencies and success. The Scottish Philosopher Adam Smith developed critical economic theory, stating that when everyone acts out of self-interest, everyone will eventually benefit, as if “an invisible hand” molds the economy. Generally speaking, this assertion as a key economic concept, along with democracy as governance model, have combined to define our ethos. However, economist agree that this thinking is naïve, since in some situations rational people acting in unbridled self-interest will result in everybody a being a loser.<sup>ii</sup> This dilemma takes place on both a micro and a macro level, for example:

*If people in the Seattle MSA were asked to chip in to build a comprehensive Sounder Light Rail network, each person would benefit by underestimating his or her share and letting others bear the cost. So for a lack of funding, the transportation would not get built.*

This logically unavoidable lose-lose consequence is known as a Nash Equilibrium, a fundamental concept of game theory. It is the most widely used method of predicting the outcome of a strategic interaction in the social sciences that entails setting up a game (in strategic or normal form) consisting of the following elements: a set of players, a set of actions (or pure strategies) available to each player, and a payoff (or utility) function for each player.<sup>iii</sup> This framework can be used to establish a theoretical framework for the strategic decisions (actions) taken by an architect and a developer throughout the building process. The Nash Equilibrium concept is better understood by looking at some examples on the following page.

<sup>i</sup> Stanley Field M.D., “How to Manage Complexity”, FACP, MACE  
<sup>ii</sup> Cho, Adrian. *Science, New Series*, Vol. 318, No. 5849 (Oct. 19, 2007), p. 375  
<sup>iii</sup> Nasser, Gamal Abdel. “Nash Equilibrium”, *International Encyclopedia of social sciences*, 2nd Edition. Pg. 540-541. 2007

		Architect	
		A	B
Developer	A	(2,2)	(0,0)
	B	(0,0)	(1,1)

The two players in this game are the architect and the developer, who both have two available actions, called A and B. If the two players both choose different actions, they each get a payoff of 0. If they both choose action A, the payoff for both of them is 2, and if they both choose B, they each get 1. This is a game of “coordination” in which the first number is the architect’s payoff and the second is the developer’s. Action profile (A,A) and (B,B) are both equilibriums since any deviation from the others action would result in a lower payoff. Nash’s Equilibrium has been developed into more complex models and applied to many practical situations in which players must cooperate. Nash’s equilibrium is useful not just as an accurate predictor for how people will behave in a game but also when it is not since it identifies situations in which there is tension between individual incentives and ulterior motives.<sup>i</sup> A class of problems that receives a significant amount of attention from this point of view is the family of “social dilemmas”, in which there is a socially desirable factor that not possible in a Nash Equilibrium. The key concept is that mutual cooperation generates the most desirable outcome in business, politics, and social settings.

<sup>i</sup> Holt CA, Roth AE (2004) The nash equilibrium: A perspective. *Proceedings of the National Academy of Sciences of the United States of America* 101: 3999–4002

## Mechanism Design

A Nash equilibrium is an optimal outcome of a game “where no player has an incentive to deviate from his or her chosen strategy after considering an opponent’s choice, despite a lose-lose outcome.<sup>i</sup> Nash also showed that every game in which the set of action available to each player is finite has at least one mixed-strategy equilibrium, one optimum strategy, and one lose-lose outcome. This sort of logical economic outcome and the social sciences that create the environment for it to take place is being challenged in a pioneering field of economic game theory called Mechanism Design.

Mechanism design is the art and science of designing rules of a game to achieve a specific outcome, even though each participant may be self-interested. In 2007, Leonid Hurwicz, Eric Maskin, and Roger Myerson won the Economic Theory Nobel Prize “for having laid the foundations of mechanism design theory.” Hurwicz explains that within every design problem (not any specific reference to architectural design), the goal function is the main “given,” while the mechanism is the unknown. Accordingly, the design problem is the inverse of traditional economic theory, which is currently devoted to the analysis of the performance of a given object, not the performance of the mechanism that created it. For example: Two auction houses are putting up bids for identical items, one auction being an English open ascending price auction while the other is a silent auction. The valuation of the two identical items may come out drastically different because of the impact of bidders learning each other’s valuations and ultimately how they bid. The different auctions types set up the framework for different valuations. The same concept can be applied to the different project delivery methods in the building industry as the method chosen will effect the end product, or building.

<sup>i</sup> Holt CA, Roth AE (2004) The nash equilibrium: A perspective. Proceedings of the National Academy of Sciences of the United States of America 101: 3999–4002

Mechanism design theory uses game theoretical reasoning to model social interactions, as varied as auctions, voting systems, negotiation protocols, and other methods for deciding on public projects.<sup>i</sup> Mathew O. Jackson, William D. Eberle Professor of Economics at Stanford University, published a review of Mechanism Theory in which he provides a clear overview. The primary focus of mechanism design is on “the design of institutions (or processes) that satisfy certain objectives, assuming that the individuals interacting through the institution (process) will act strategically and may hold private information that is relevant to the decision at hand.” One question the theory asks is whether one can design a mechanism through which negotiations occur (or a negotiations protocol) to induce efficient exchange of ideas/information so that successful outcomes can occur even when the negotiations are unbalanced. The institutions and processes that govern the interaction of the individuals are modeled as mechanisms. In a Mechanism, each individual has a strategy space and decisions result as a function of the message chosen.<sup>ii</sup> Literature reviews of the theory have discovered that a perfect mechanism is often time impossible to achieve, nevertheless the real lesson to take away for this theory is that there are important settings that can be “designed” to create incentives and efficiencies that are compatible across individuals operating within a complex system like commercial real estate development. A perfect mechanism is nearly impossible to design, but despite this fact, the idea that any direction towards the goal of achieving a Pareto optimal outcome is a good direction. The qualitative theory that explains mechanism design is both complex and changing, so for the purpose of this thesis we will use it as a jumping point to focus on the premise, designing an integrated project delivery method that combines architecture and development services.

<sup>i</sup> Jackson, Mathew O., Mechanism Theory, Pg.2

<sup>ii</sup> Jackson, Mathew O., Mechanism Theory, Pg. 4

## Organization Theory

A general mechanism design setting contain individuals, decisions, and preferences/ information. A finite group of individuals interact to take action on a set of decisions that are denoted, with each individual holding private information. The problem is to design a mechanism to that when individuals interact through the mechanism, they have incentives to choose to communicate as a function about their private information and preferences that lead to socially desired outcomes. Within the real estate industry, construction project delivery methods are mechanisms to guide individuals in making decisions about how to increase the value and usefulness of a property. In this context, we can better understand how architects can use their design abilities to not only design architecture, but to design a method to the means of achieving architecture.

Theodore T. Lynch, CEO of Southland Industries, wrote his Doctorate of Architectural Engineering thesis, "A Transaction Cost Framework for Evaluating Construction Project Organization," on the ways in which different project delivery systems achieve the goals of an owner. His work builds upon the work of Torger Reve and Raymond E. Levitt to apply organization theory to the construction process as means to control costs, and the outcome.<sup>i</sup> Much of the theory behind organizational structure examine the relationship within an organization, but in Lynches research, firms in the construction process replace departments as the functional entities. Organizational theory then is a way to view and analyze organizations more accurately and deeply than one otherwise could.<sup>ii</sup>

<sup>i</sup> Reve, T. and Levitt, R. E. [1984]. "Organization and governance in construction" Project Management, 2(1), 17-25

<sup>ii</sup> Lynch, Theodore T. Pg. 15

## Organizational Schools of Thought

Lynch presents a selection of histories and different schools of thought as a way to illustrate his understanding of organization:

1. **Classic Management Perspective.** This includes two principle perspective, administrative and scientific, to make decisions about organizations and job design based on precise procedures and a hierarchy of orders. Project management and other project management techniques are extensions of this today.
2. **Project Management.** The main purpose of project management is to provide a "unifying agent" across various functions of an organization. This method addresses questions about relationships within an organization, not between them.
3. **Human Relations Perspective.** Theory that aim to restore individuals with their needs and drives, showing that positive treatment of employees increased motivation and productivity.
4. **Bureaucracy.** Max Weber, one the most influential political scientist of the 20th century, established a set or organizational characteristics that would ensure efficient functioning in both a public and private setting. They include rules and regulations, specialization and division of labor, heierarchy of authority, technically qualified personnel, separate position than stake holder, and written communication.

5. **Decision making.** Organizations later were deemed to be rational, problem-solving, decision making systems by themselves, essentially making decisions on behalf of its members. Satisfying, bounded reality, and contingency are a few of the important theories that emerged from this school of thought.

6. **Technology.** The theory behind its effects on characters within an organization dates to the 1960s when research focused on technology's imposing effects on manufacturing production organization during a time a mass production advances. The effects that technology has on organizational structure is apparent in today's day in age. The accessibility of markets and advances in communication through IT is empowering individuals to act in the same capacity as organization in the past, mainly due to productivity tools and access to information. Digital technology is rapidly changing organizational theory, its influence will be discussed in further detail.

7. **Environment.** There are many different types of uncertainties in a complex and rapidly changing external environment. Buffering and boundary spanning are important concepts involving an organizations interactions with the external environment. Because organizations are open to many different external variables, buffering entails assigning roles that deal with uncertainties and boundary spanning is the act of these roles providing information about the environment. When the external environment is complex and uncertain, it requires many differentiations in specialized bodies of knowledge to solve a problem. As differentiation increases, so does the need for integration. Organizations perform better when the level of differentiation and integration match the level of uncertainty in the environment.

## Entrepreneurial Architecture

While the short term goal of a firm in the project delivery organization may be to successfully complete a project their long term goal of survival and growth may be divergent. The idea that the project delivery system has a direct effect on the outcome of a construction project follows the same logic as mechanism design and organizational theory. When interests are aligned between members of an organization from the very inception of a project, there is a more successful outcome.

Using mechanism design theory and organizational theory, architects can design a project delivery method in which they know the Nash Equilibrium, or "optimal outcome", prior to even starting. Building on these existing theories, architects can begin to use cutting edge microeconomic theory to redefine how it is to reach its goal. However conceptual it may remain, this theory is an important starting point towards architectural agency.

### Coordinating Contracts

As the number of contracts gets reduced, the owners efforts in coordinating those efforts should also decrease. The scope of the projects will overlap in a way that closes gaps in the sharing of information and work. When goals are established as an organization, even prior to any procurement or land control, information that help reach that goal will be on the table.

The level of contract integration is the degree in which the processes of design, construction, and development are combined to create a mechanism for building. This is represented by the contracts between the three entities. In a low integration mechanism, every specialty subcontractor and A&E consultant would be individually contracting with the owner. A highly integrated mechanism can be represented by a single contract between the owner and one entity. Designing a system that reduces contractual reliance on functional requirements, shifting functional or performance requirements from a contractual basis to the actual buildings performance, will drastically reduce a situation where little design has been completed and the overall requirements for a facility are functionally specified. The cost impact also includes being able to develop pre-contract informational requirements with the aid of design thinking, eliminate the hours involved in creating, reviewing, and negotiating development proposal bids.

### Unique Selling Proposition Concept

A unique selling proposition is a marketing concept used to describe factors that differentiates a product from its competitors, such as the lowest cost, high quality, best value, superior craftsmanship, or aesthetic pleasure. Architects will have the ability to refine their craft by building upon experience and knowledge about their buildings' performances. When this is attached to a defined "style", architects can market the value of design by associating a design approach with a specific development. In the [Design + Development] mechanism, developing building systems become an exercise that when adopted as a viable strategy, can be tested with every project that is completed. Being a project delivery method with one entity that makes decisions about the architectural design and specifications, defining the marketing strategy to integrate market research with design intent becomes a distinct advantage.

### Aligning Risk

This might be a funny thing to address given that architects tend to be risk averse, but learning to manage risk is of the utmost importance in [Design + Development]. When there is equity invested in a "goal function", an actor become a stakeholder in the "mechanism", thereby becoming decision making process. When the mechanism for constructing a building unifies risks across all fronts, the motivation or each actor will also become unified. Risk tolerance is a very important aspect of real estate development. Each firm and individual will possess their own tolerance, which will need to be discussed at the organizational level on a project basis. Increasing risk also means increasing reward, so for many architects this may be an attraction in itself.



## Chapter 4 Critical Look\_ Design Development in Perspective

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### Design Development Risks and Realities

The proposed project delivery model is not the silver bullet because such a thing doesn't exist in a market as dynamic as the real estate industry. As much of the risks can be internalized and managed, there is always a significant amount of external risk in real estate development, including market risk, political risk, or even natural disasters. With externalities aside, and realities at play, design development has both pros and cons, which we will cover in the following segment.

For most architects "developers were always thought of as the bad guys." Lauren Askew, an accomplished architecture professional who went on to assume the role of design director of a successful development firm, recalls the dean of the architecture school at North Carolina State stating "development was not a place for architects who cared about design." Central to the discussion in this section is a dichotomy of the motives by architects and developers highlighted in the research. Understanding their respective value systems, and where they overlap, will aid in deciphering the positives and negatives of architects developing their own architecture.

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### Overcoming Stigma

Architects believe in the power of design and have always been dedicated to increasing accessibility of good design. The real estate industry drives a majority of the projects that get built in a city, so to abhor partnership or participation basically removes the architectural profession from having a significant influence on delivering good design to people. Architects heavily involved in development must often overcome a negative stigma associated with this form of practice.<sup>i</sup> It is true that real estate developers and architects have divergent vested interest within a project. Robert Steinberg, FAIA, and architect-developer advised:

*"Architects and developers have fundamentally different yardsticks for measuring success. Most architects value permanence, a philosophical imperative to leave something behind [i.e., social value]. The developer's yardstick is usually, simply money; if you do not value and have money, you are not a developer long [i.e., economic value]."*<sup>ii</sup>

The prominent negative argument against architects developing their own projects is that design quality becomes sacrificed. Writing in the late 1980s about John Portman, Rem Koolhaas suggested that eliminating the opposition between architects and the client results in loss of an essential creative element. According to Koolhaas, the culture of the architectural profession is anti-business, emphasizing creative expression, so economic issues often can interfere with artistic expression.<sup>iii</sup> Gene Dub, a Canadian architect/developer admitted that "the time required to deal with the program and financial matters leaves less time to devote to design matters."<sup>iv</sup> This problem of extremes can be addressed if there two perspectives can reach Pareto optimality. Even if a perfect equilibrium cannot be reached right away, incremental increases in design integrity is a step in right direction towards the proliferation of impactful design.

i Livesey, Graham. pg. 26  
ii Miller, Robert. Pg. 19  
iii Miller, Robert. Pg. Appendix 14  
iv Livesey, Graham. pg. 28

The definite positive of changing architecture's perception of real estate development is that it will allow more projects to be given "value" in terms of time spent on design thinking. Dropping the guard on commercial real estate and instead pursuing more "bland" projects would help design reach every corner of society, not just the parts that have direct cultural significance. People, who for their own reasons, do not understand that design makes a difference will see that the extra time spend on thinking spacial issues through in the most mundane of projects, will become believers in positivity and importance of design. With enhanced design "projects cost a bit more than others and sometimes take longer to build, but they also gain community acceptance, luring tenants, and gaining in value."<sup>i</sup> Most developers do not understand the importance good design brings to a project but its qualities "will determine which projects emerge from tough times looking less like hard-bitten survivors than something that redefines both itself and its place and time."<sup>ii</sup> On the contrary to his previous statement, Gene Dub acknowledges the process allows for "greater control over the design process, and more freedom to design your own program, tastes, and schedule."<sup>iii</sup> Instead of putting in time, passion, and energy into designing a building for someone else's portfolio, architecture firms will have the ability to generate continued cash flow from their projects that will also have a design advantage in the market.

i Caldwell, K. pg. 65  
 ii Slatin, Peter. Pg. 104  
 iii Livesey, Graham. pg. 28

Design thinking and innovation is secondary to making a profit in the architect/developer model which can be viewed by the architectural profession as blasphemy. Lee Mallett stated, "make money and make good buildings – in that order. If you don't do the first, you won't do the second. If you don't do the second, no one will remember you." The reality of development is that it requires a solid knowledge of financing, real estate and marketing. The AIA includes in its bylaws a section that addresses the ethical obligation of architects who are also the project owner by requiring firms to "render architectural services fully and impartially, and financial interests must not override professional responsibility and impartiality." The dangers of combining architecture with development, as Rem Koolhaas stated, "can be both powerful and highly destructive", referring to John Portman's large buildings in downtown Atlanta that are "devoid of vitality." If left unchecked by either partners within a firm or the associated professional communities, architect/developers can become megalomaniacs, creating buildings that have lost essential creative element. Development is inherently risky on multiple levels including capital market risk, inflation risk, environmental risk, space market risk, tenant risk, or liquidity risk just to name the major ones.<sup>i</sup> But with architecture firms passing on certain responsibilities in building projects over the past decades in an attempt to shield risk, they have also given up large potential gains that also come with taking risk. There are both positives and negatives of [Design + Development] anf this approach is not for every architect. But for the ones who do decide they want to have a greater impact through direct action, this is an excellent model.

i Fisher, Jeffrey D. and Martin, Robert S. Pg. 377-379



## Chapter 5 Conclusion

The architectural profession has been under constant attack from forces that seek to control the built environment, relegating the responsibility of architects to protect the public's safety and well-being. If architects today were to be described in comparison to the architects of the past, would they be called leaders? Artists? Intellectuals? Professionals? Would the architects of the last century choose to practice today or during their time? At a time when the role of architects could not be any more important, as cities urbanize at a rapid pace, the profession is waning and searching for a common direction. It would be foolish to not recognize the proposition of taking a commanding position on the economics and finance that drives building projects in today's political economic environment. For architecture to accrue influence on how our built environment evolves into the future, or even independently commission itself to act, we must understand and participate in the larger system this process operates within, the real estate industry. The evidence and theory supporting the consolidating design and development services is cutting edge and convincing. The manner in which a project delivery method addresses key components of a construction project directly reflects the outcome of that process. The opportunity is on the table for architects and developers to finally align interests to create the positive difference that is needed in our urban communities. Architectural agency is possible, and I believe this is the most viable path to creating a lasting and meaningful step forward.



## PART 2: DESIGN DEVELOPMENT DEMONSTRATION

### Design Development Proposal

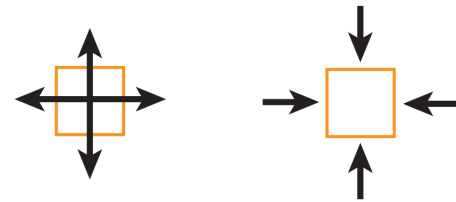
*This thesis proposes a mixed-use, mixed-income design and development in Seattle's Central District. Joint site design with Johnathan Konkol.*



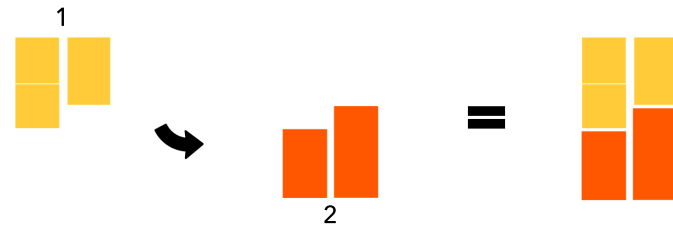
## Chapter 6 Goals

### Development Goals

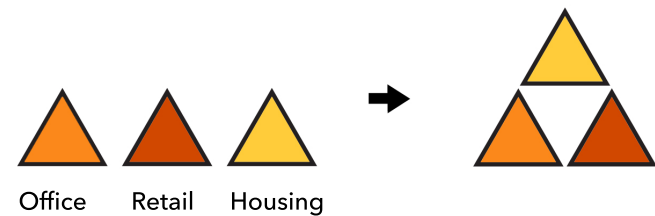
#### 1 Transform 23rd and Union from a transit route into a destination



#### 2 Finance development phase 2 with phase 1



#### 3 Develop a synergistic mixed use community

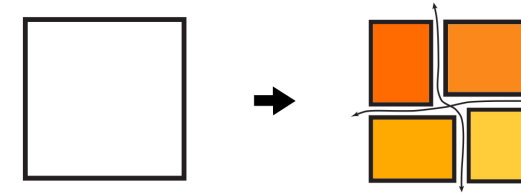


56

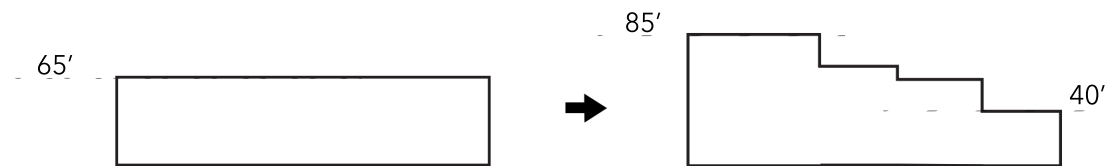
57

### Design Goals

#### 1 Ground level permeability



#### 2 Precision density

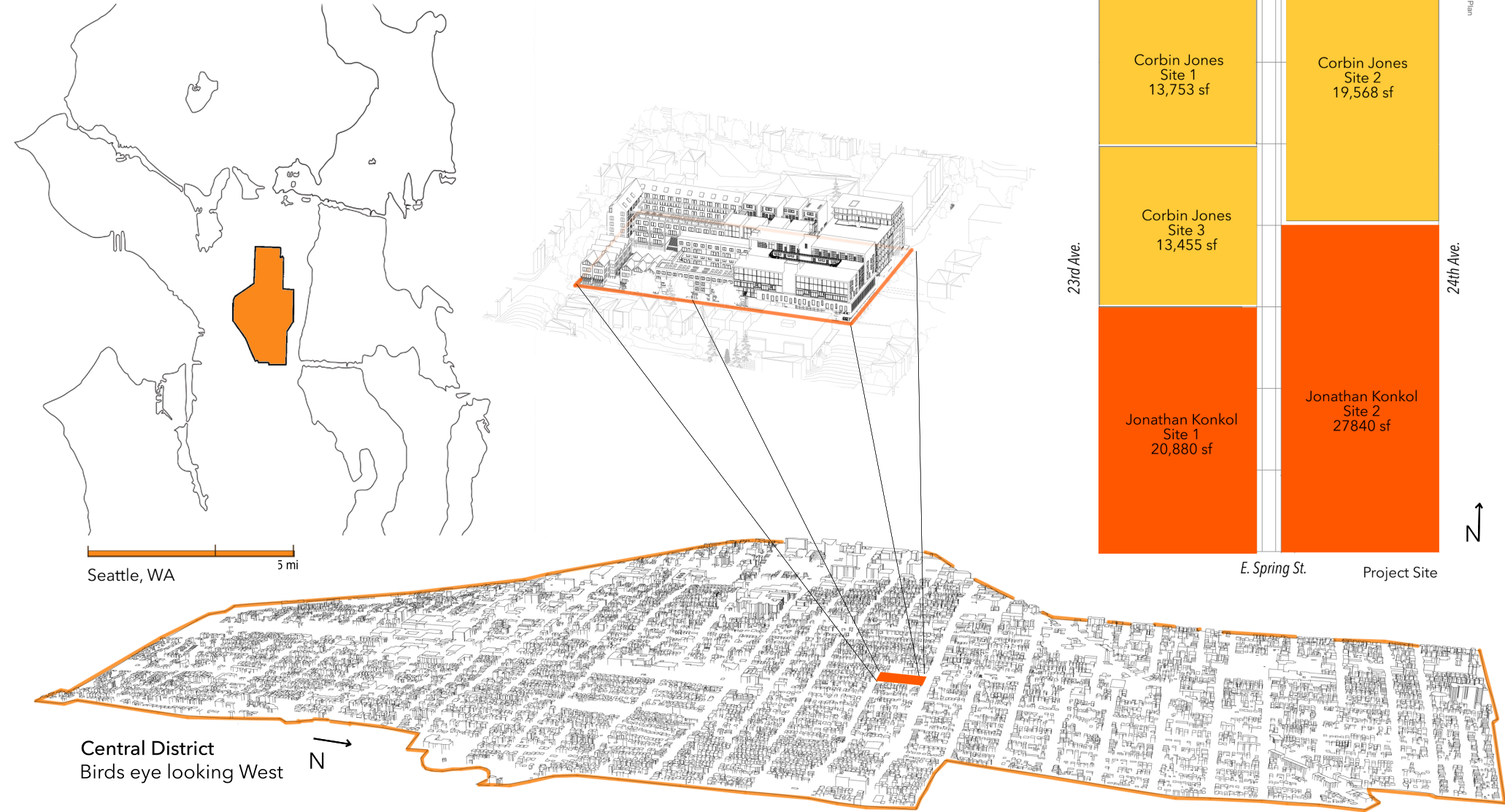


#### 3 Equitable access





# Chapter 7 Site Analysis



# Bicycle Corridors Central District

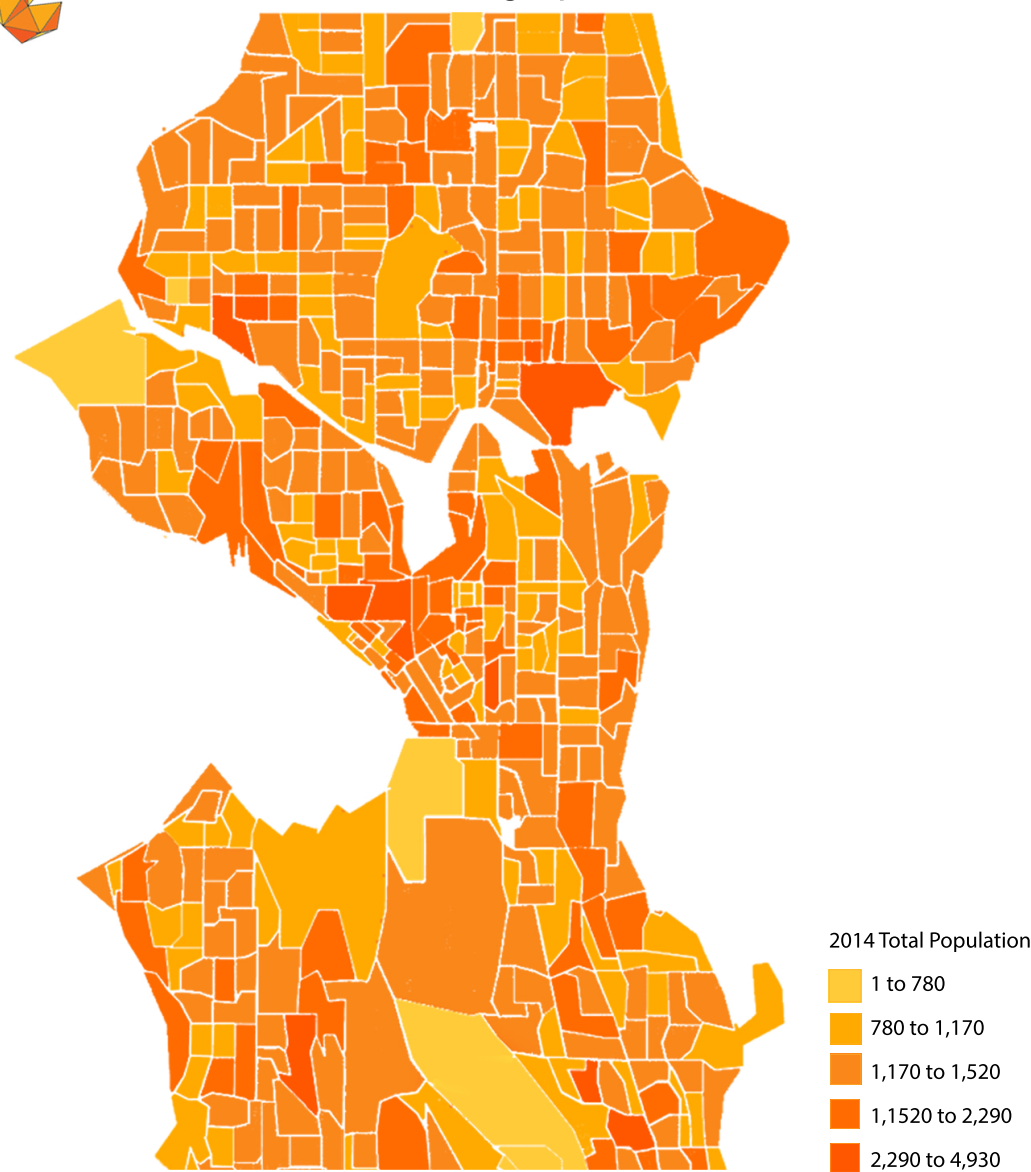




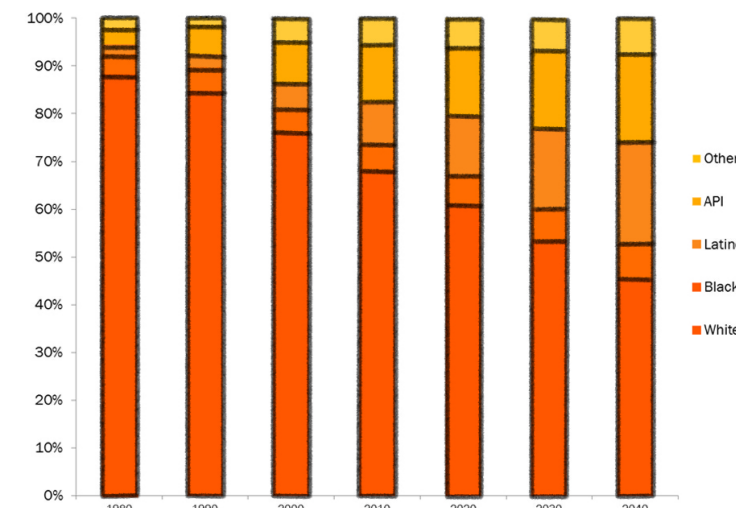
### Bus Corridors Linkages



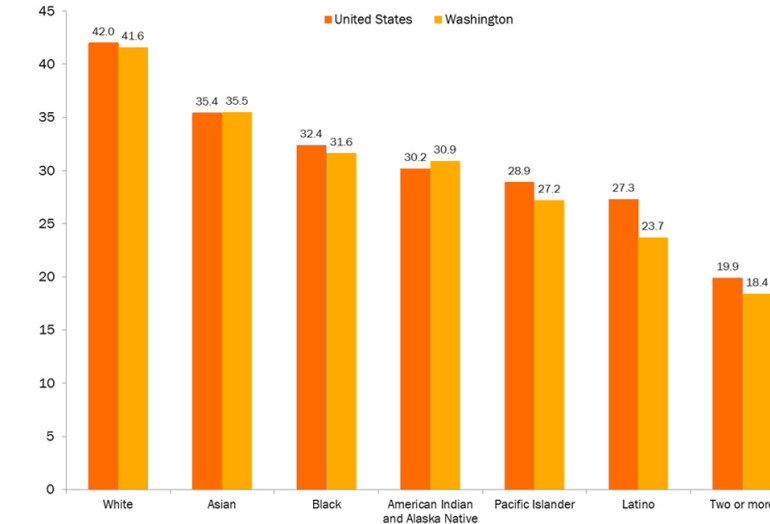
### Seattle Demographics



### Projected Seattle Metro Demographics 1980-2040

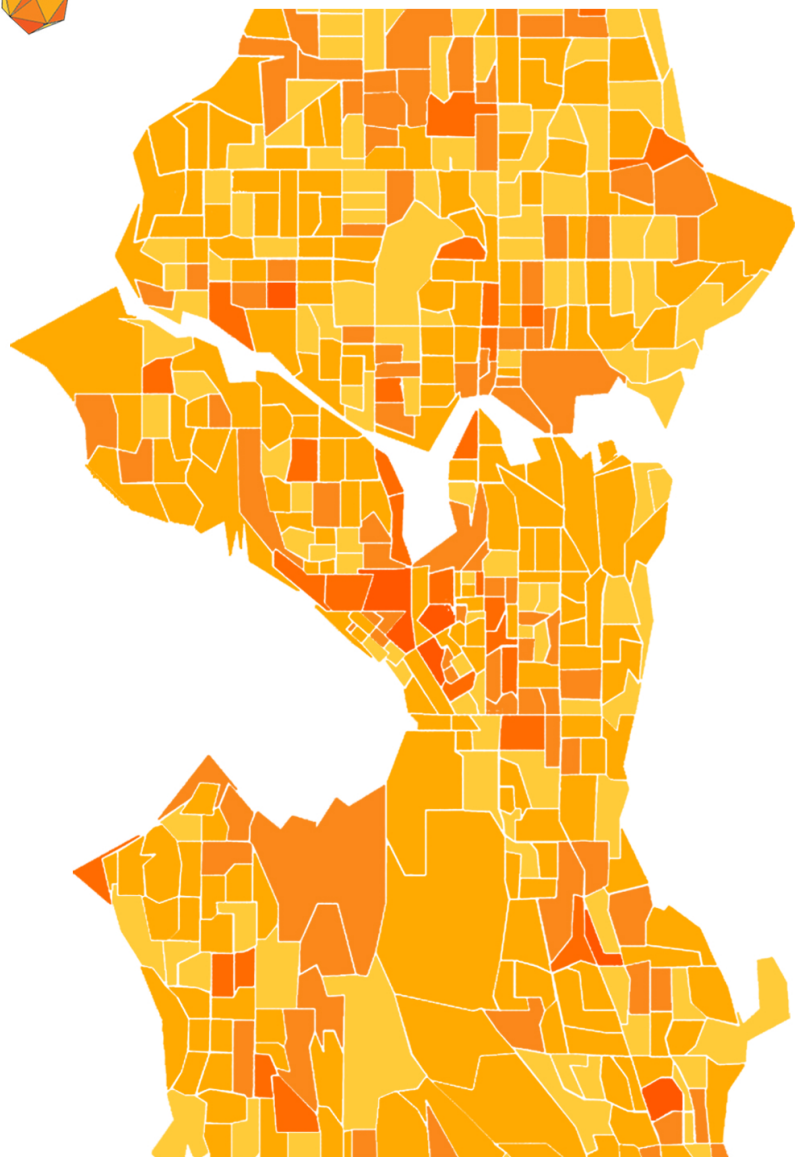


### Median Age by Race/Ethnicity 2010





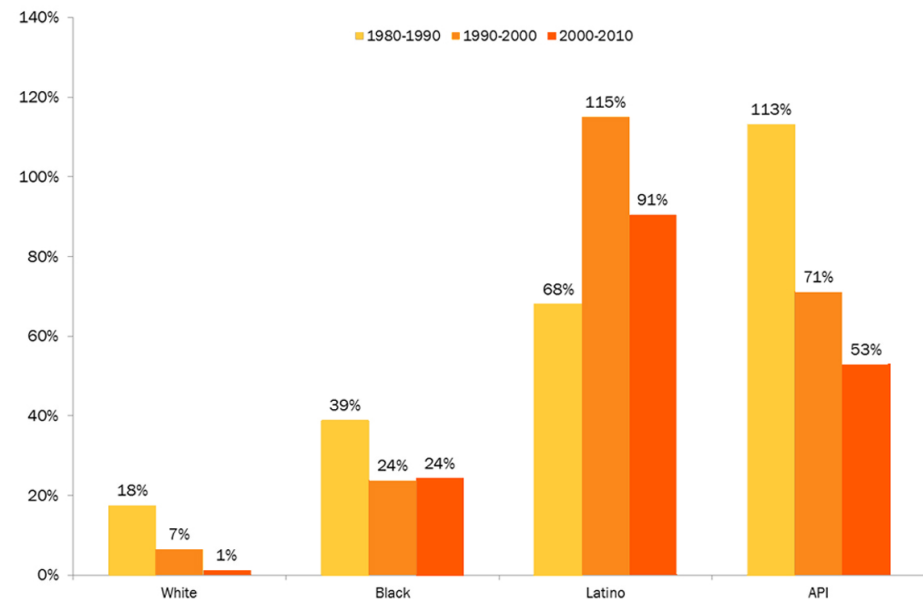
### Seattle Demographics



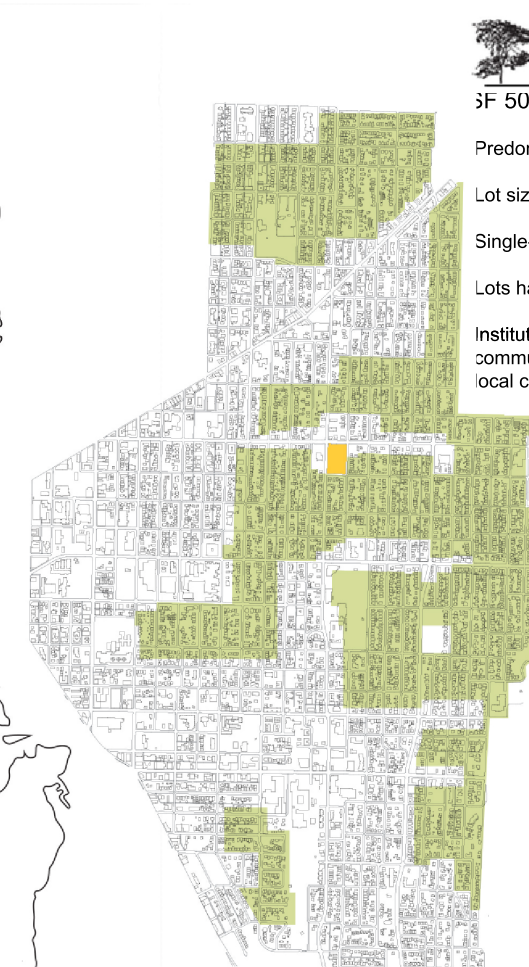
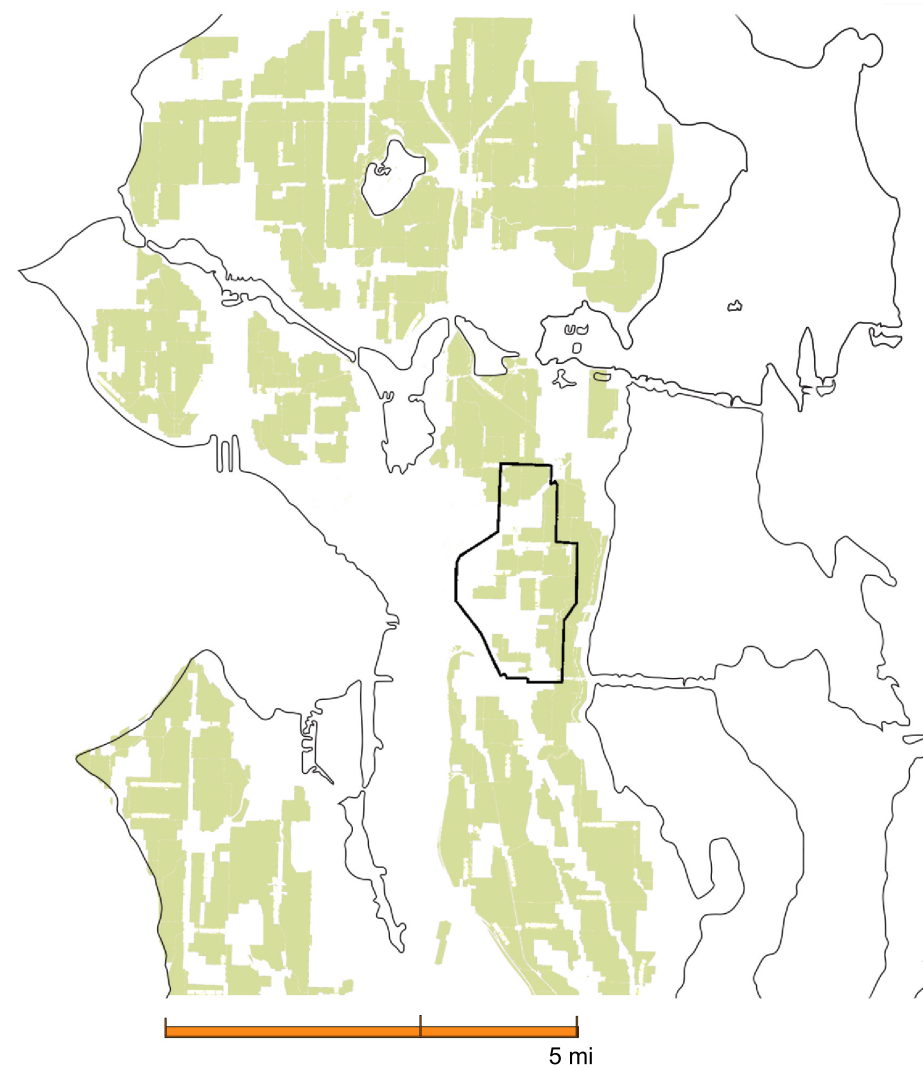
2010-2014 Population:  
Annual Growth Rate

- 2.12 to .024
- .24 to 1.32
- 1.32 to 3.00
- 3.00 to 6.70
- 6.70 to 13.00

Seattle Metro Decadal Growth Rates for Population by Race/Ethnicity  
1980 - 2010



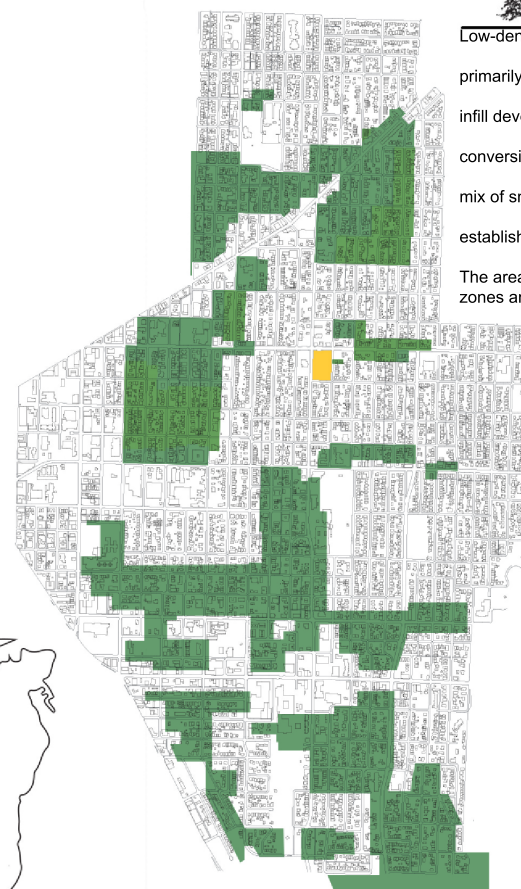
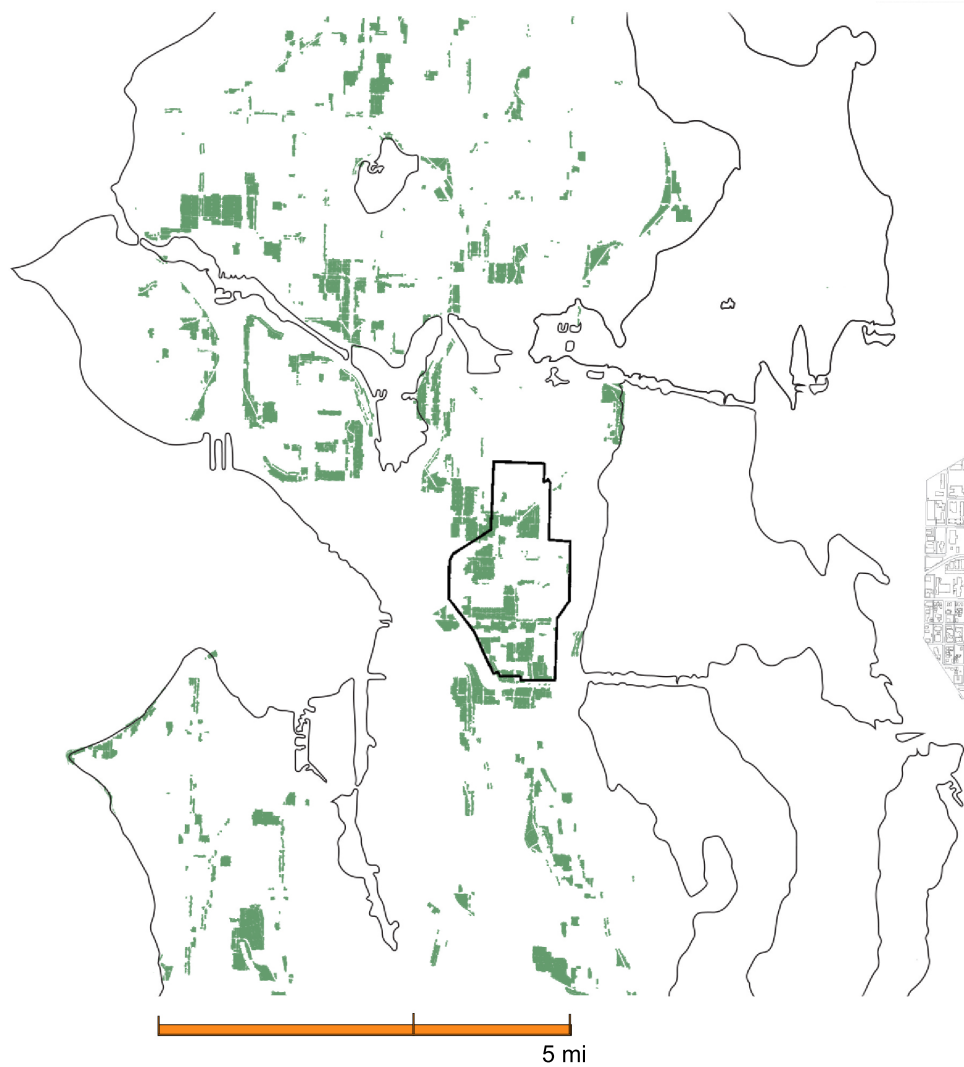
### Seattle's Single Family Zones



- Predominantly detached single-family structures
- Lot sizes are compaable with existing pattern of development
- Single-family structures may have accessory units
- Lots have front and side yards and are usually plated with trees
- Institutions like religiois facilites, libraries, schools, and community centers are mixed in as conditional uses serving local community



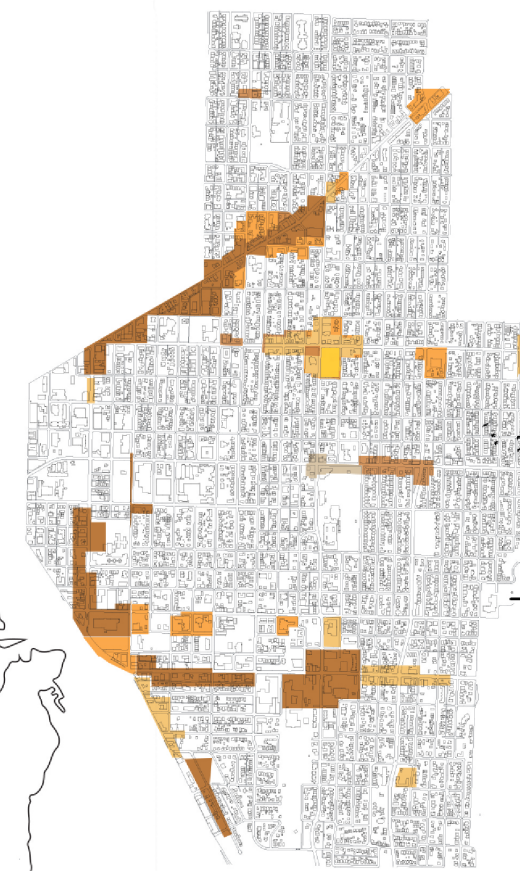
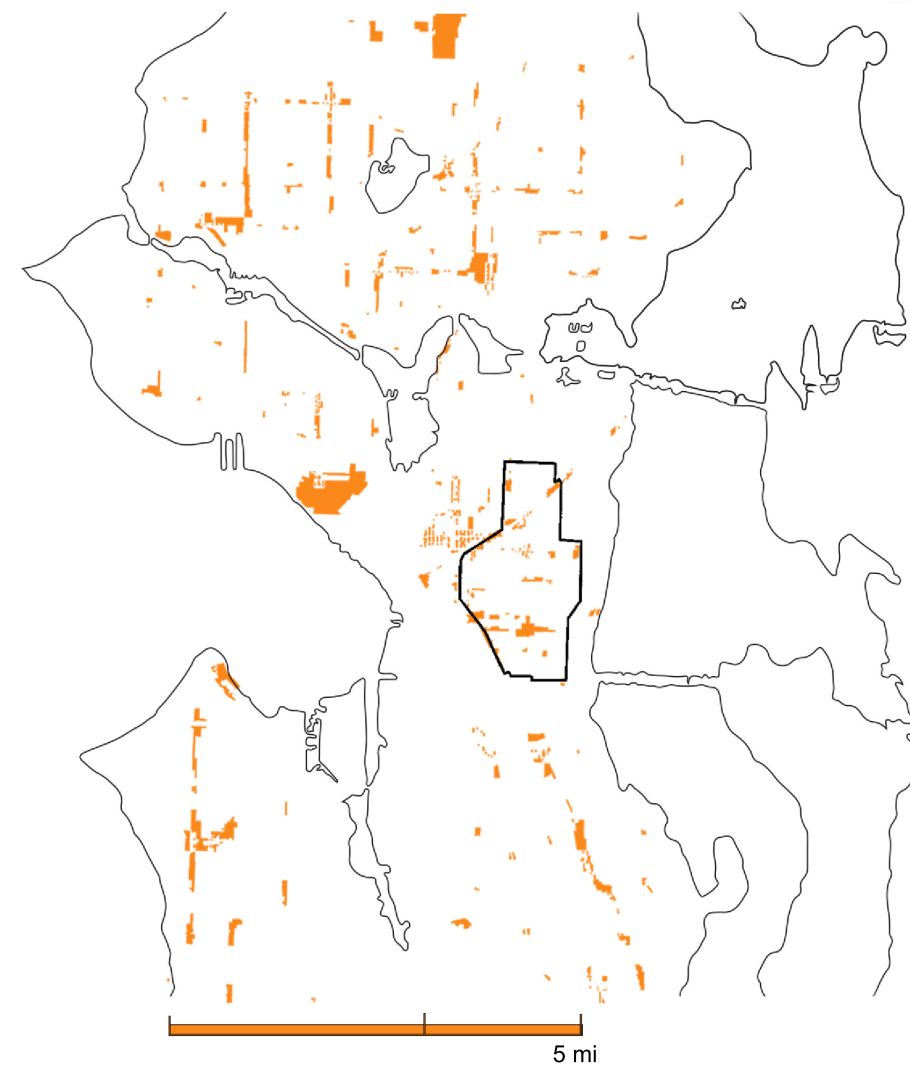
### Seattle's Lowrise Multifamily Zones



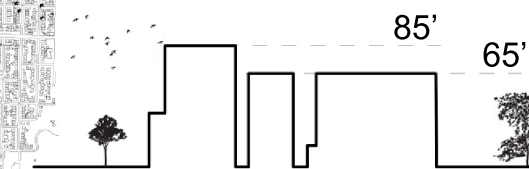
Low-density multifamily housing,  
 primarily rowhouse and townhouse developments  
 infill development that is compatible with single-family dwelling units,  
 conversion of existing single-family dwellings to duplexes or triplexes.  
 mix of small scale residential structures  
 establish multifamily neighborhoods of low scale and density.  
 The area would provide a transition in scale between LR1 and/or LR2  
 zones and more intensive multifamily and/or commercial zones



### Seattle's Neighborhood Commercial Zones



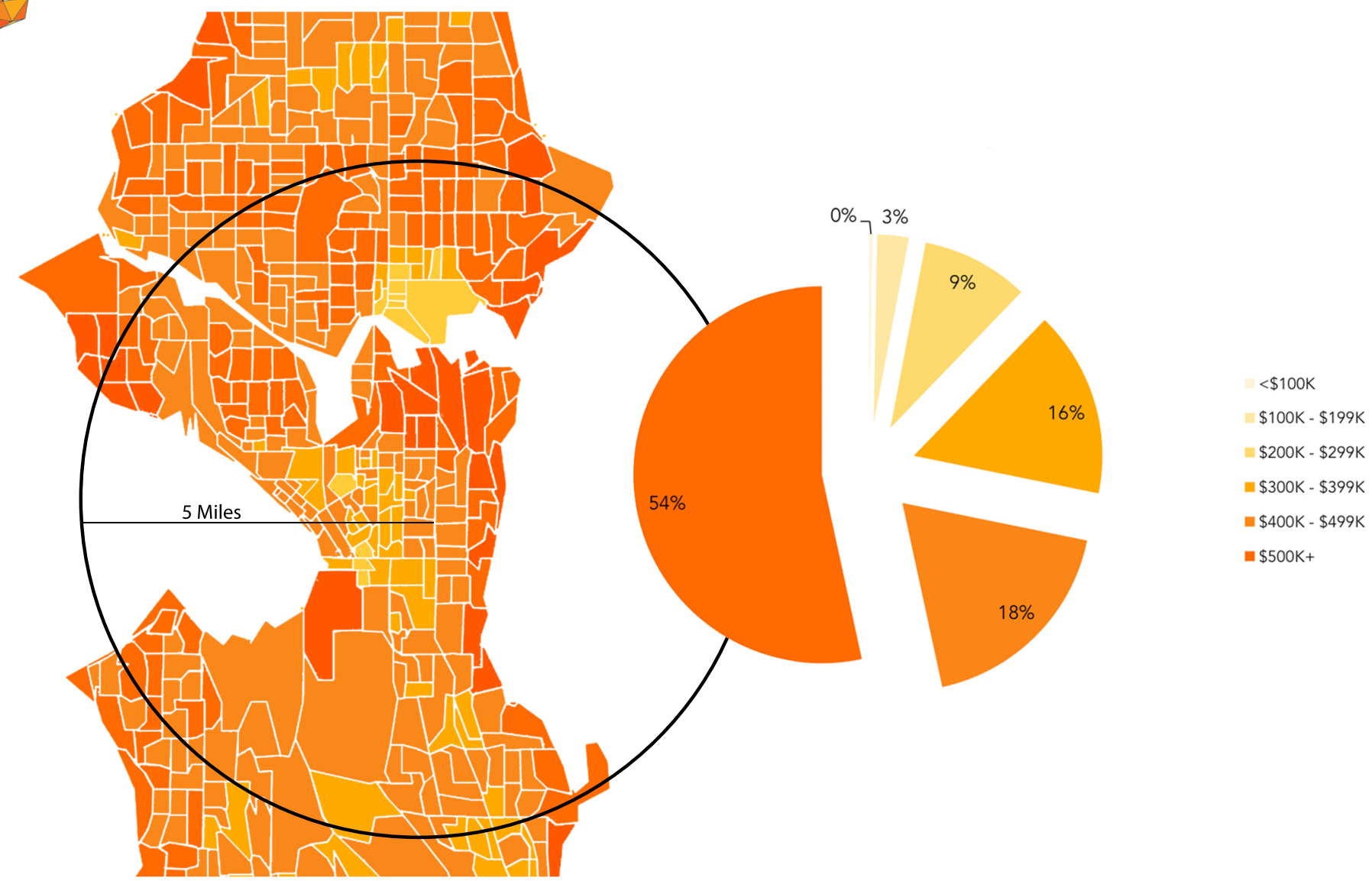
Neighborhood Commercial 1 + 2  
 Primarily multifamily housing above ground floor retail  
 Variety of small to medium sized neighborhood-serving businesses  
 Continuous storefronts built to the from lot line  
 An atmosphere attractive to pedestrian-oriented shopping that  
 provides a range of household and personal goods and services  
 Located on street with good capacity, such as principal and minor  
 arterials.  
 Lack strong edge to buffer the residential areas



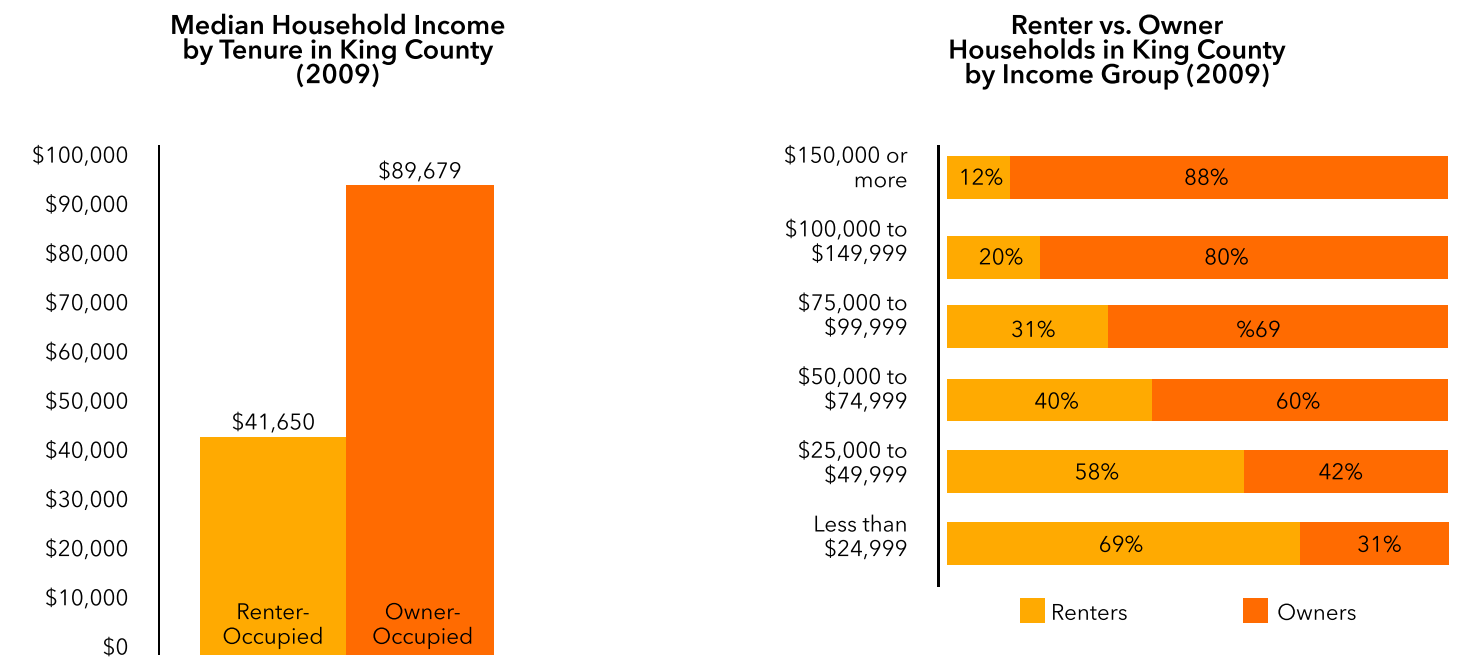
Neighborhood Commercial 2 +3  
 Typically multifamily over large anchor retail and smaller retail  
 Supports and encourages a pedestrian-oriented shopping district  
 that serves the surrounding neighborhood and larger community,  
 citywide, or regional clientele.  
 A variety of sizes and types of retail and other commercial business-  
 es at street  
 Transit is an important means of access  
 Separated from low density residential areas by physical edges, less  
 intense commercial areas, or more intense residential areas.



### 2014 Home Value 5 Mile Radius of 23rd and Union



### Household Income by Tenure King County

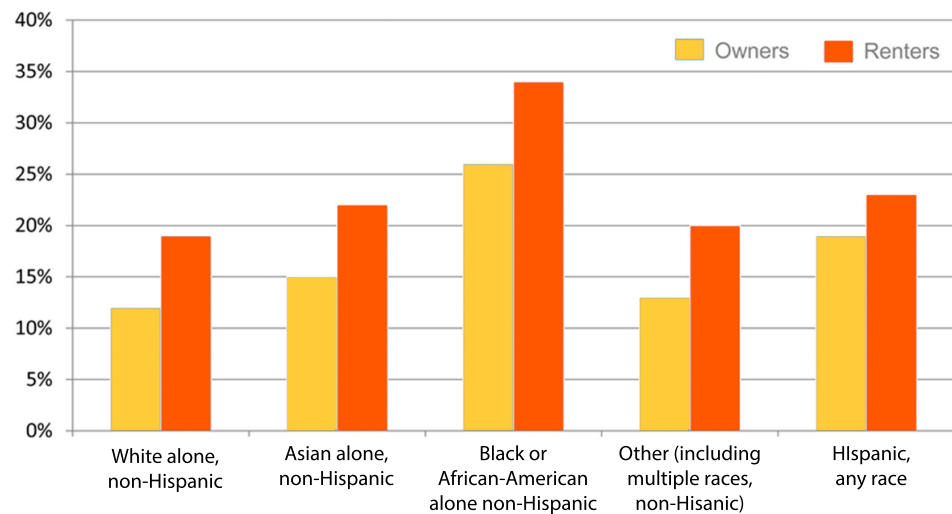




## Housing Costs and Ownership Rates by Race Seattle City

### Severe Housing Cost by Race/Ethnicity

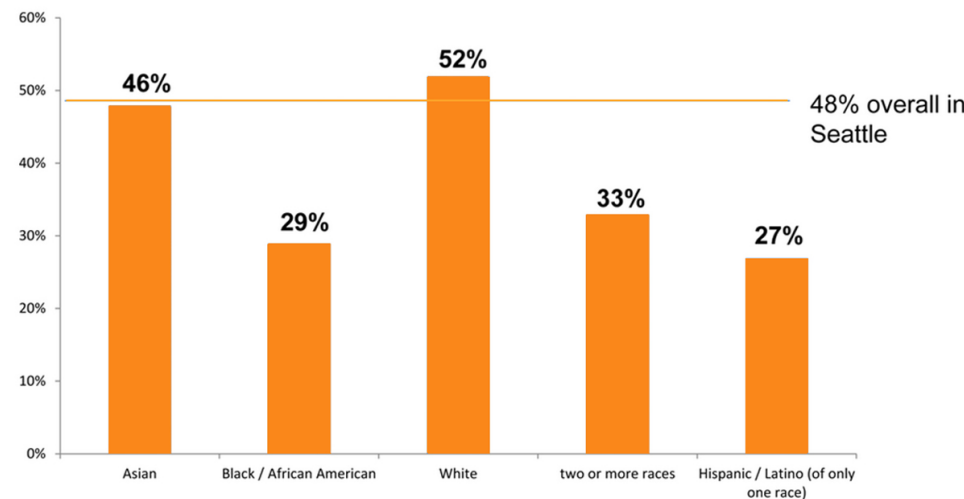
Over 25% of Black/African American owners, and close to 35% of Black/African American renters, pay more than half their incomes for housing.



Source: U.S. Department of Housing & Urban Development, CHAS, 2006-2010 5-Year American Community Survey, Seattle city.

### Homeownership Rates by Major Category Ethnicity

Homeownership rates for Black/African American, Hispanic/Latino and mixed race households are significantly lower than for Asian and White households.



Source: US Census. 2010 decennial Census.



## Rental Rates and Affordability Seattle Market



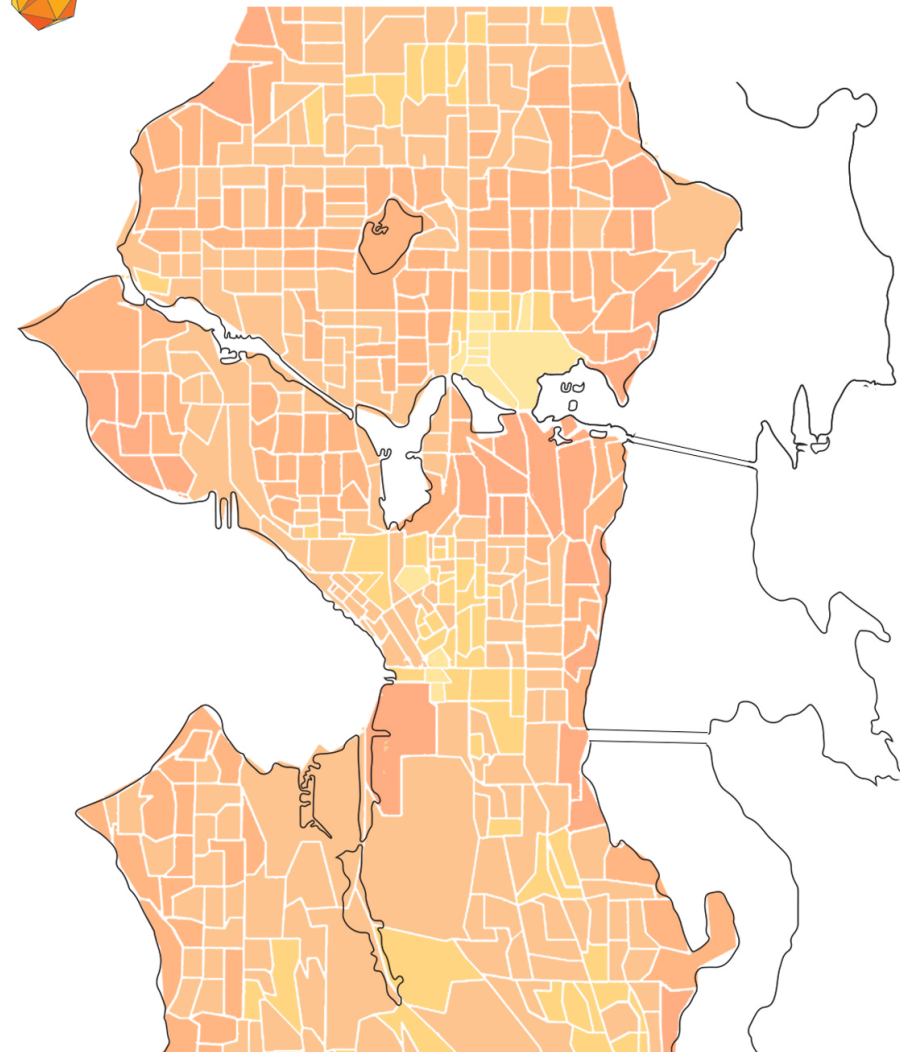
### Fall 2014 Market Rents 20+ Unit Property

Unit Size	Average	New Construction
All Units	\$1,488	\$1,836
0 Bedrooms	\$1,169	\$1,392
1 Bedroom	\$1,412	\$1,780
2 Bedrooms 1 Bath	\$1,605	\$2,132
2 Bedrooms 2 Bath	\$2,156	\$2,722
3 Bedrooms 2 Bath	\$2,411	\$3,019

### Affordable Rents Including Utilities at 30% of Household Income

Family Size	Percentage of Area Median Income				
	30%	50%	60%	80%	100%
0 Bedrooms	\$463	\$772	\$927	\$1,236	\$1,545
1 Bedroom	\$496	\$827	\$993	\$1,324	\$1,655
2 Bedrooms	\$596	\$992	\$1,191	\$1,588	\$1,985
3 Bedrooms	\$688	\$1,146	\$1,376	\$1,835	\$2,293
4 Bedrooms	\$767	\$1,280	\$1,536	\$2,048	\$2,560
5 Bedrooms	\$846	\$1,411	\$1,694	\$2,259	\$2,823

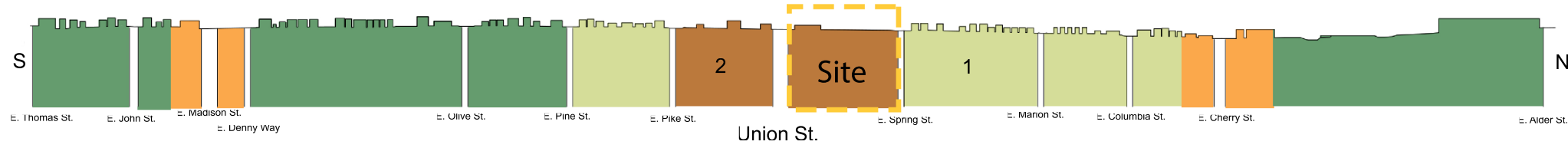
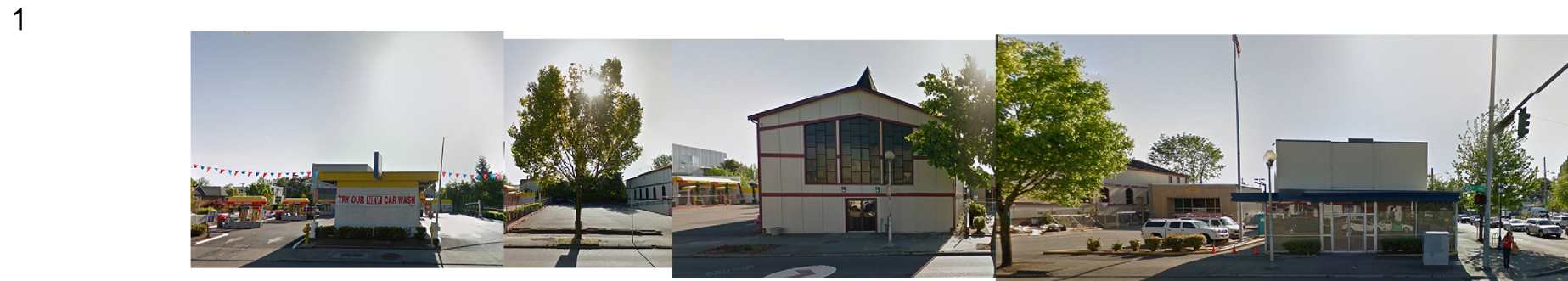
2014 Average Household Income as % of AMI Seattle-Bellevue



Percentage of Area Median Income

Family Size	30%	50%	60%	80%	100%
1 Person	\$18,550	\$30,900	\$37,080	\$49,440	\$61,800
2 Person	\$21,200	\$35,300	\$42,360	\$56,480	\$70,600
3 Person	\$23,250	\$39,700	\$47,640	\$63,520	\$79,400
4 Person	\$26,450	\$44,100	\$52,920	\$70,560	\$88,200
5 Person	\$28,600	\$47,650	\$57,180	\$76,240	\$95,300
6 Person	\$31,970	\$51,200	\$61,440	\$81,920	\$102,400
7 Person	\$36,030	\$54,700	\$65,640	\$87,520	\$109,400
8 Person	\$40,090	\$58,250	\$69,900	\$93,200	\$116,500

23rd Avenue Section Central District

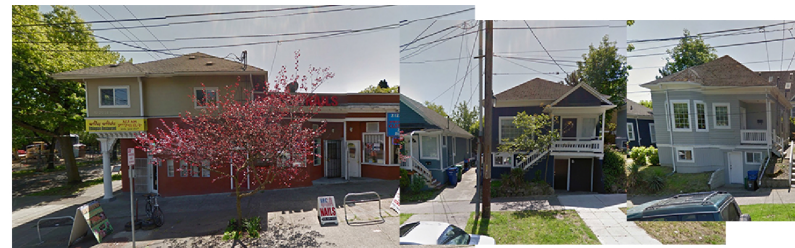




E. Union Street Section Central District



4



1



2

STENCIL

2407 E UNION ST



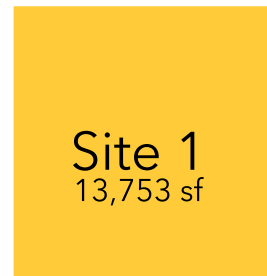
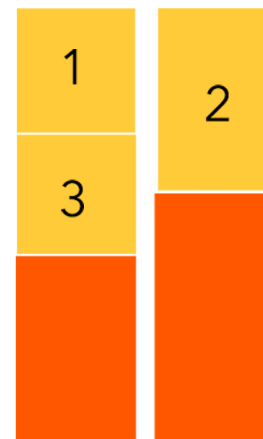
3



E. Union St. Section



Chapter 8 Project Program



[Co Working + Office + Retail]

Retail: 5,968 sf  
Co Working Office: 22,861sf  
Market Rate Office: 23,270 sf

Total SF: 56,394 sf

NC3 85' Allowable: 82,518 sf  
NC3 65' Allowable: 61,888 sf



[Multifamily + Anchor Grocery]

Anchor Grocery: 28,806 sf  
Residential: 58 Units

Total SF: 75,475 sf

NC3 85' Allowable: 117,408 sf  
NC3 65' Allowable: 88,056 sf

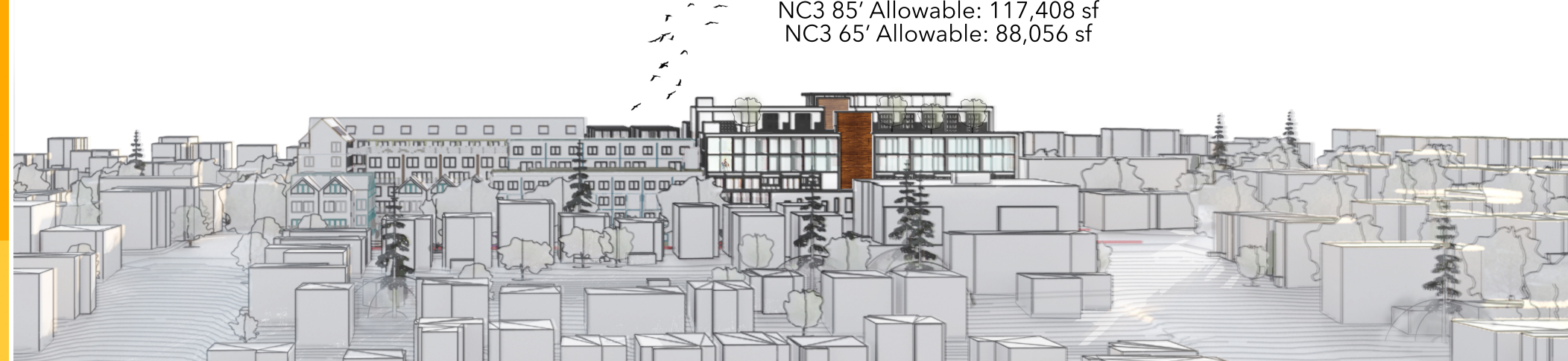


[Multifamily + Neighborhood Retail]

Retail: 6,104 sf  
Residential: 54 Units

Total SF: 44,985 sf

NC3 65' Allowable: 60,547 sf





# [Design+Development] Demonstration

## Retail

Total Retail: 42,094 sf.  
 Anchor Tenant: 28,806 sf.  
 Medium Box: 3,419 sf.  
 Small Box: 2,549 sf.

**Design Goals:** Equitable access to transit oriented density for neighborhood businesses.

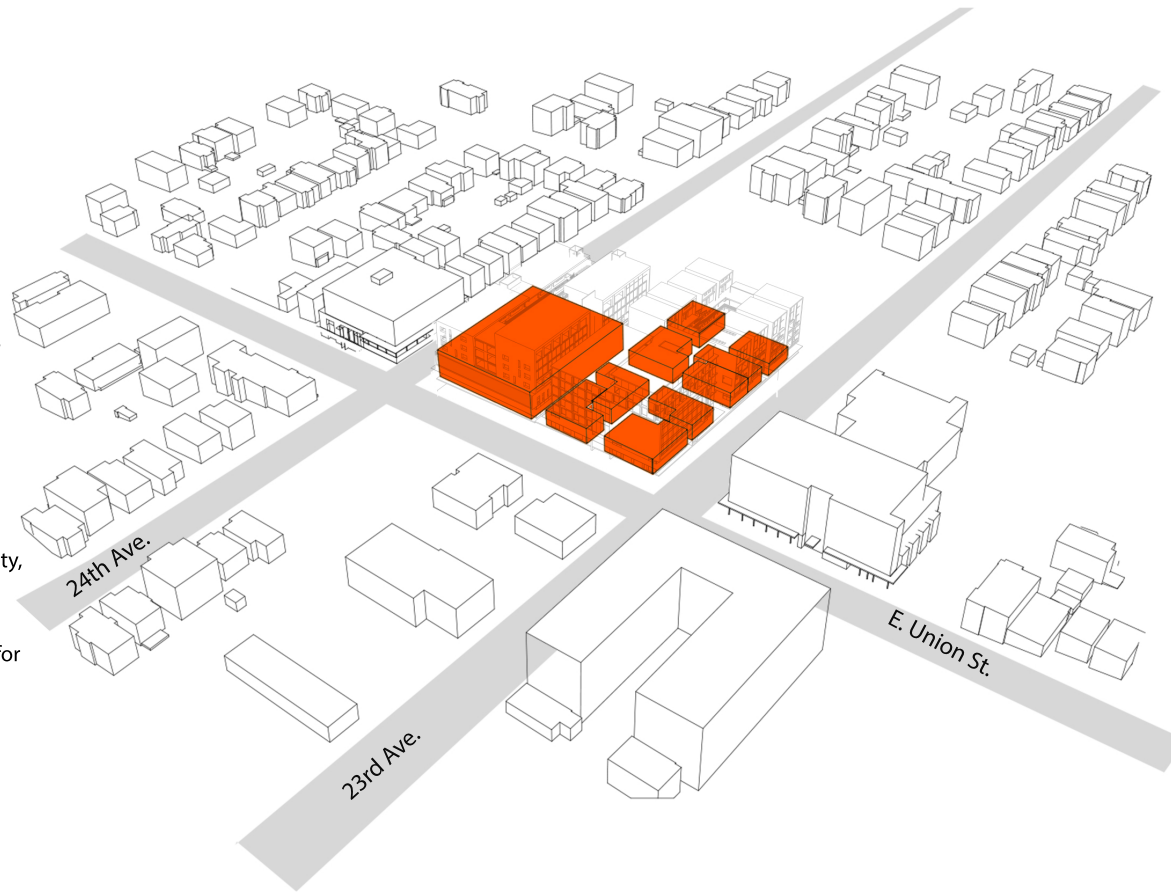
Ensure Streets are inviting, inclusive and active.

Retain current culture as new ones are welcomed.

**Development Goals:** Establish 23rd and Union as a destination retail node.

Infuse co-working entrepreneurs into small retail spaces to create opportunity, excitement, and keep vacancy down.

Retail that is perceived as an amenity for residential tenants, again decreasing vacancy.



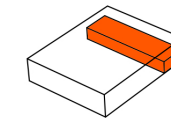
# [Design+Development] Demonstration

## Retail

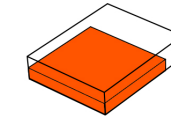
Anchor Tenant  
28,206 sf.

Typical Lot Coverage  
28,206 sf

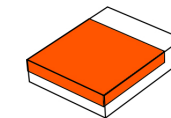
Proposed Lot Coverage  
13,675 sf.



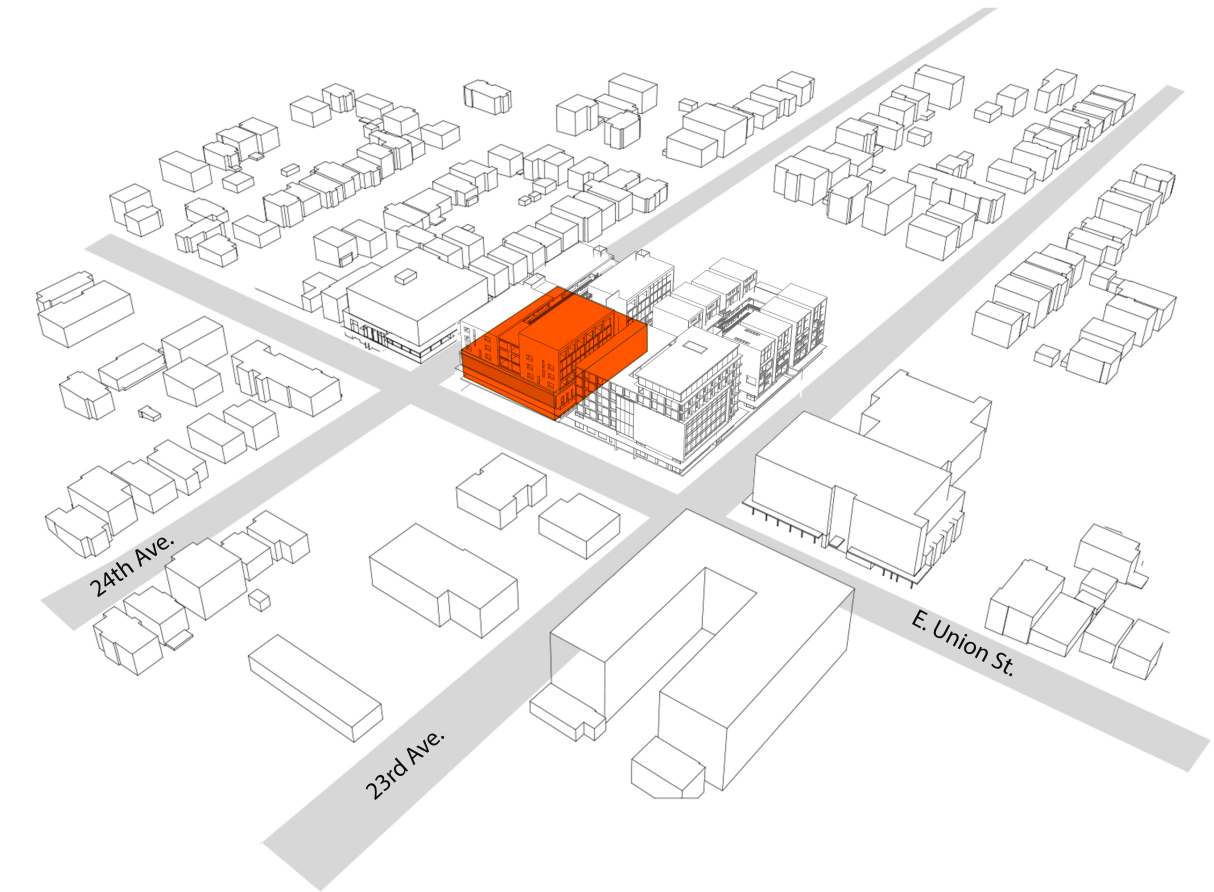
**Loading** 3,261 sf.  
From Alley in back of site



**Fresh Produce / Market** 10,414 sf.  
Fronting street on Union, 24th, and Alley



**Non-Perishables** 15,131 sf.  
Mezzanine level

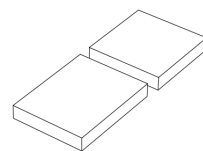




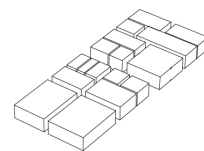
# [Design+Development] Demonstration

## Retail

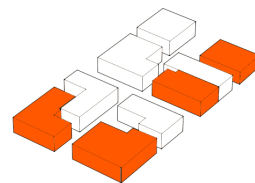
Small + Medium Box  
2,549 + 3,419 sf.



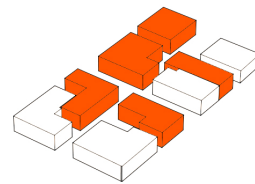
Typical Retail Box  
5,000-12,000 sf.



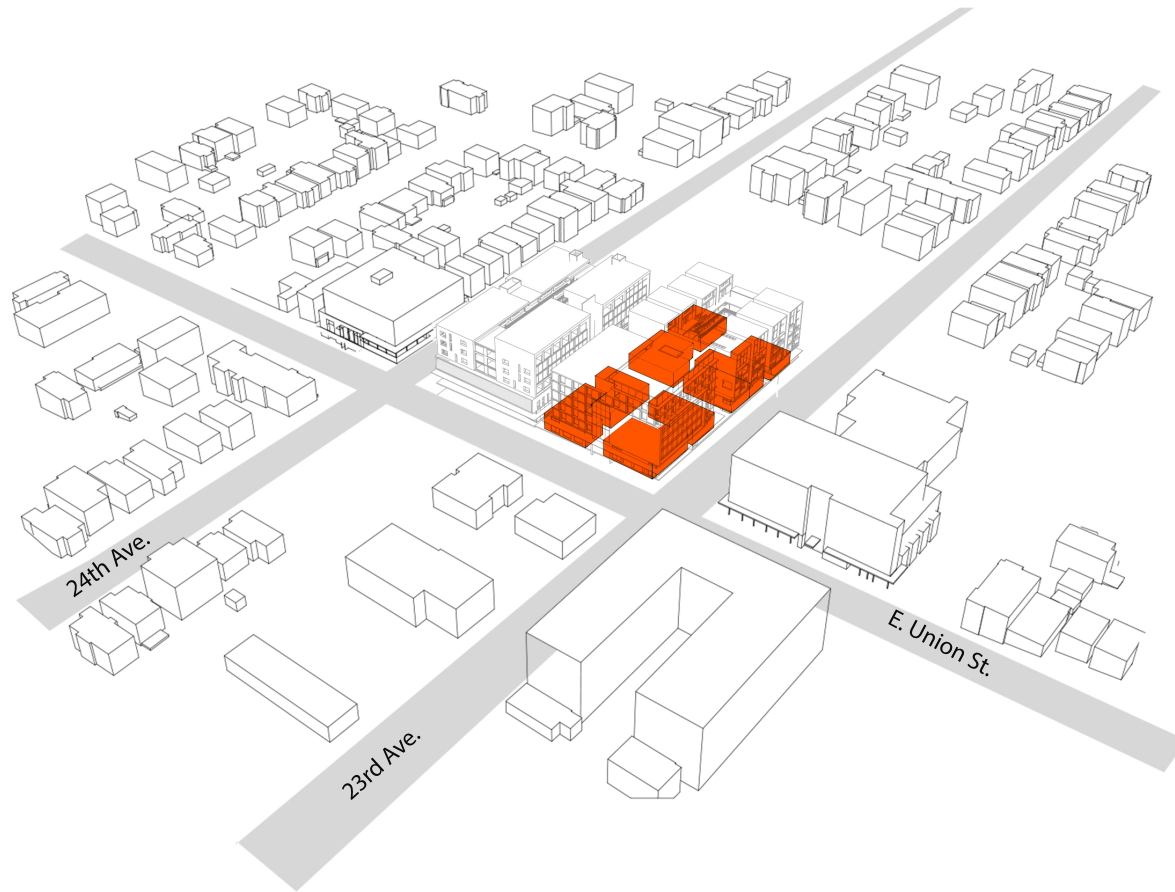
Proposed Retail  
300-2,000 sf.



**Medium Holds Corners and Street**  
Street edge priority and holding major corners to activate street and attract passing people.



**Small Liven Interior Pathway**  
Collection of small shops create various visual variety and allow local small business' to participate.



# [Design+Development] Demonstration

## Office

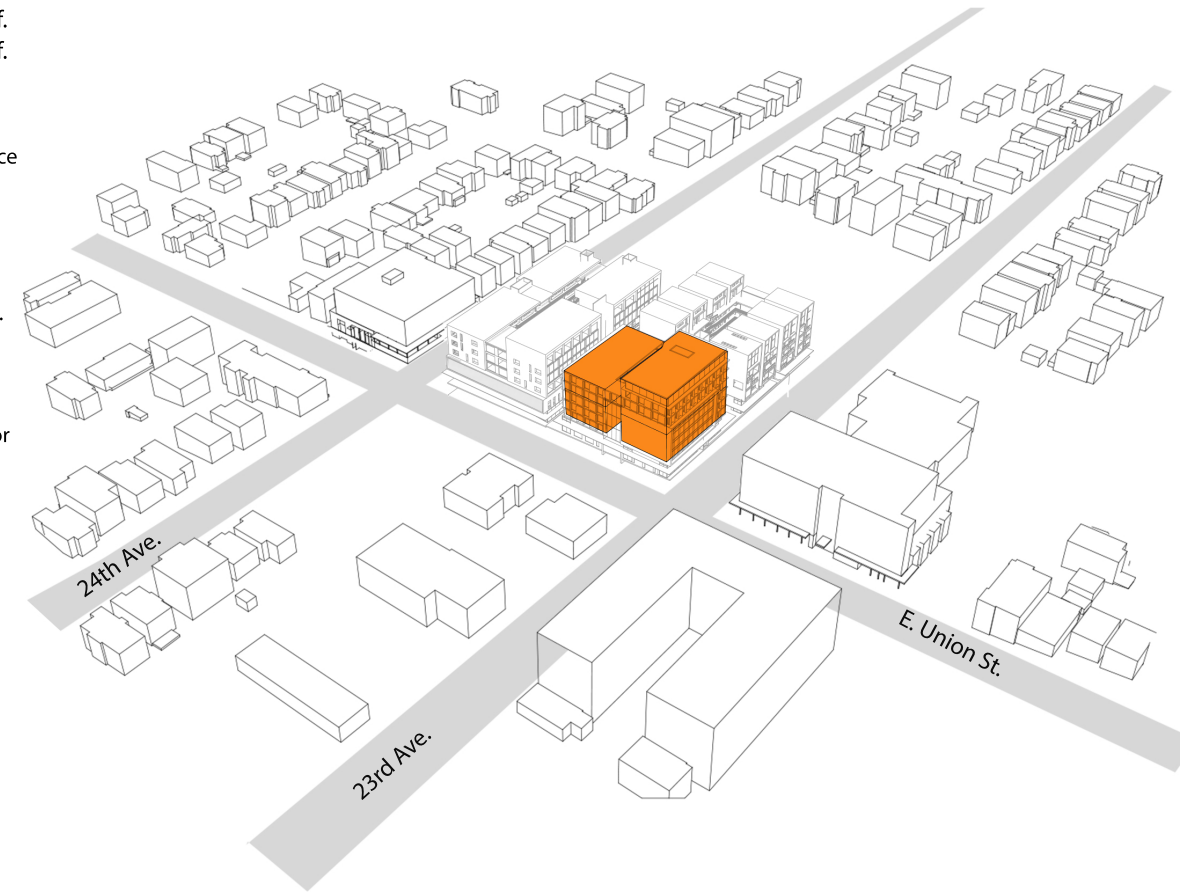
Total Office: 46,131 sf.  
Co-working: 22,861 sf.  
Market Rate: 23,270 sf.

**Design Goals:** Create a semi-public community space that empowers entrepreneurship and small business development.

Provides opportunities for community members to learn and work together.

**Development Goals:** Capitalize on the growing demand for co-working space.

Establish a property use that is synergetic with the surrounding residential density.

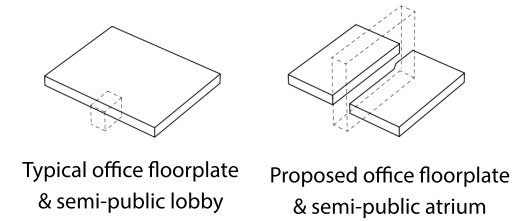




# [Design+Development] Demonstration

## Office

Co-working  
22,861 sf.



Typical office floorplate & semi-public lobby | Proposed office floorplate & semi-public atrium



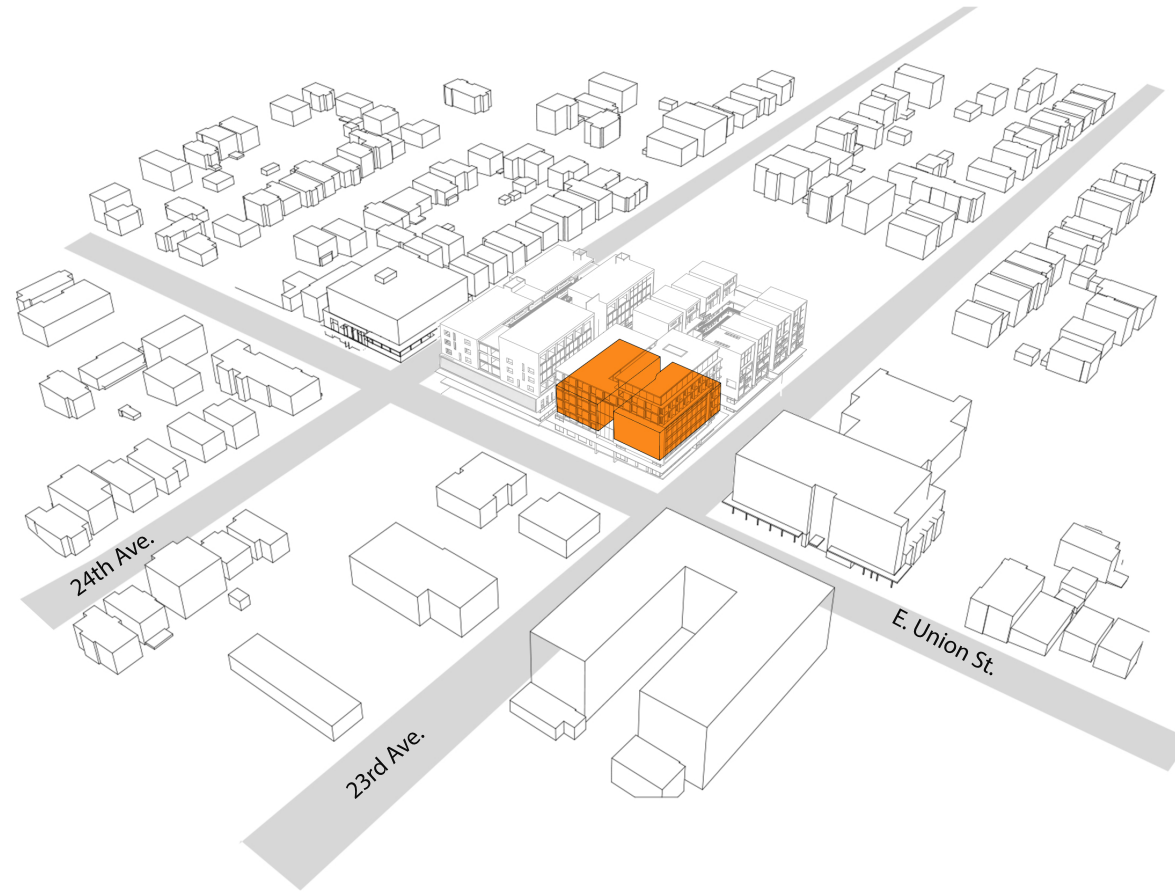
Flexible Focus Spaces / Workdesks  
Private focus workspaces



Open Workspace  
Semi-Private solo workspaces



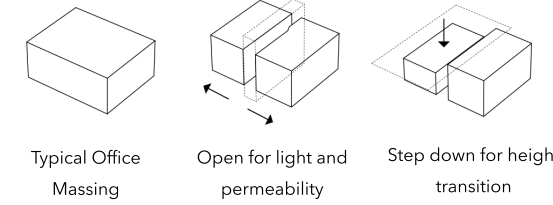
Team Rooms / Event Space / Labs  
Semi-private group activities



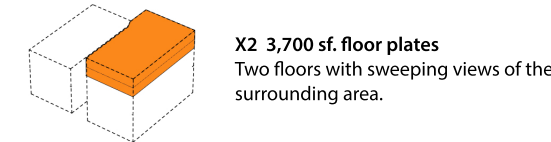
# [Design+Development] Demonstration

## Office

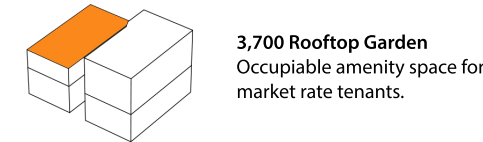
Market Rate Office  
23,270 sf.



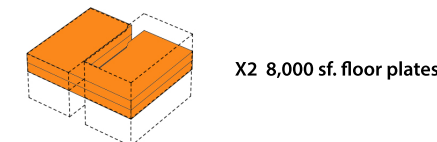
Typical Office Massing | Open for light and permeability | Step down for height transition



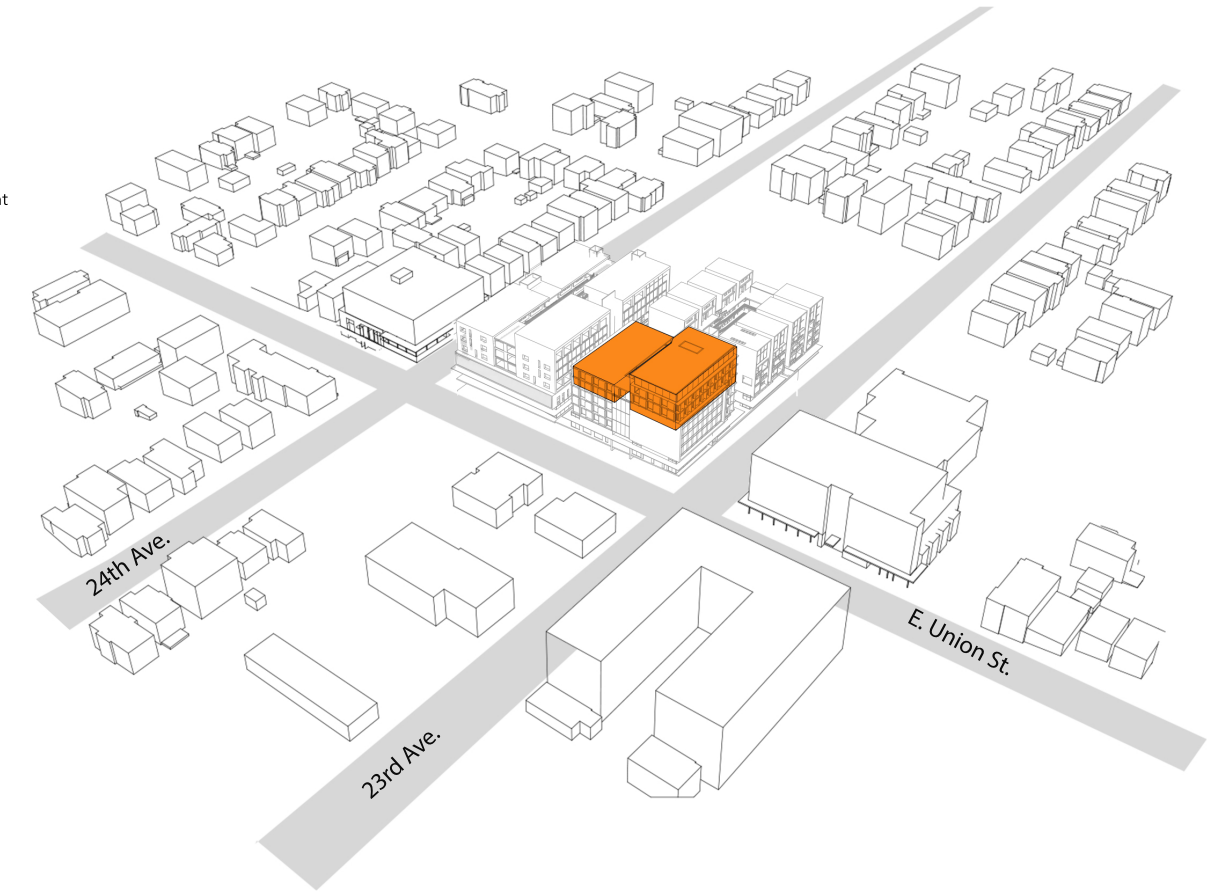
X2 3,700 sf. floor plates  
Two floors with sweeping views of the surrounding area.



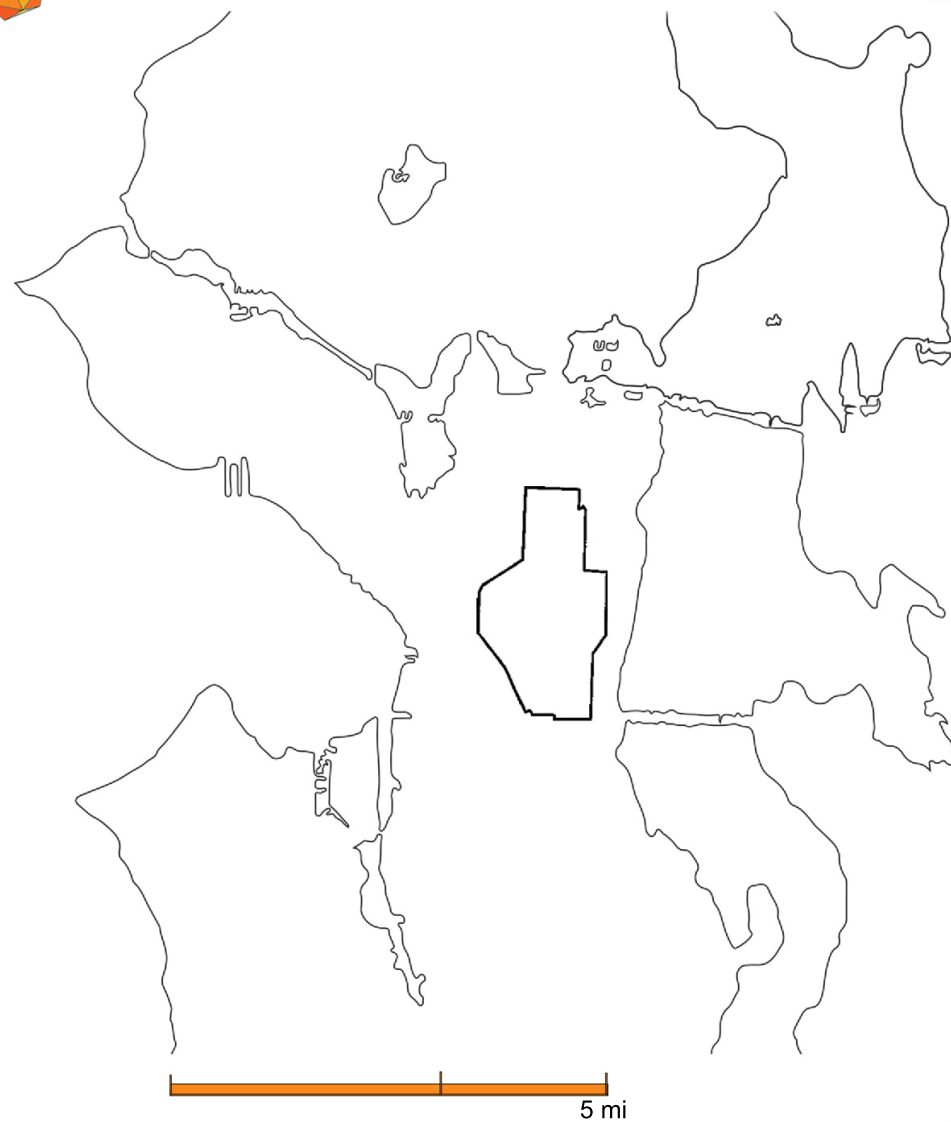
3,700 Rooftop Garden  
Occupiable amenity space for market rate tenants.



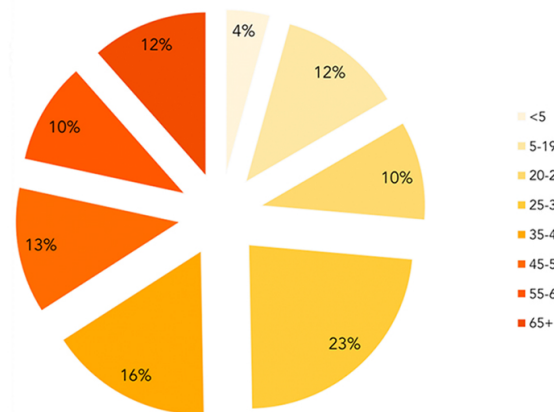
X2 8,000 sf. floor plates



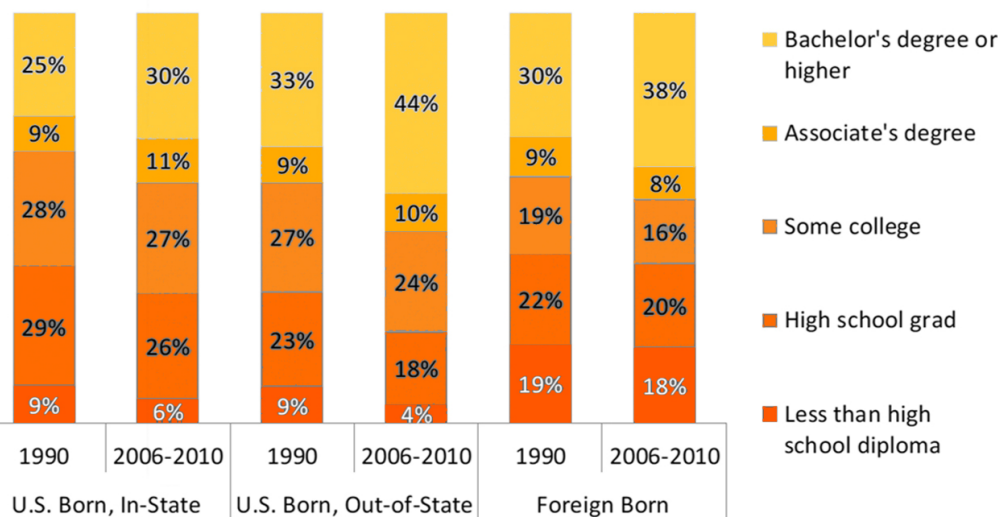
## Co Working User Demographics



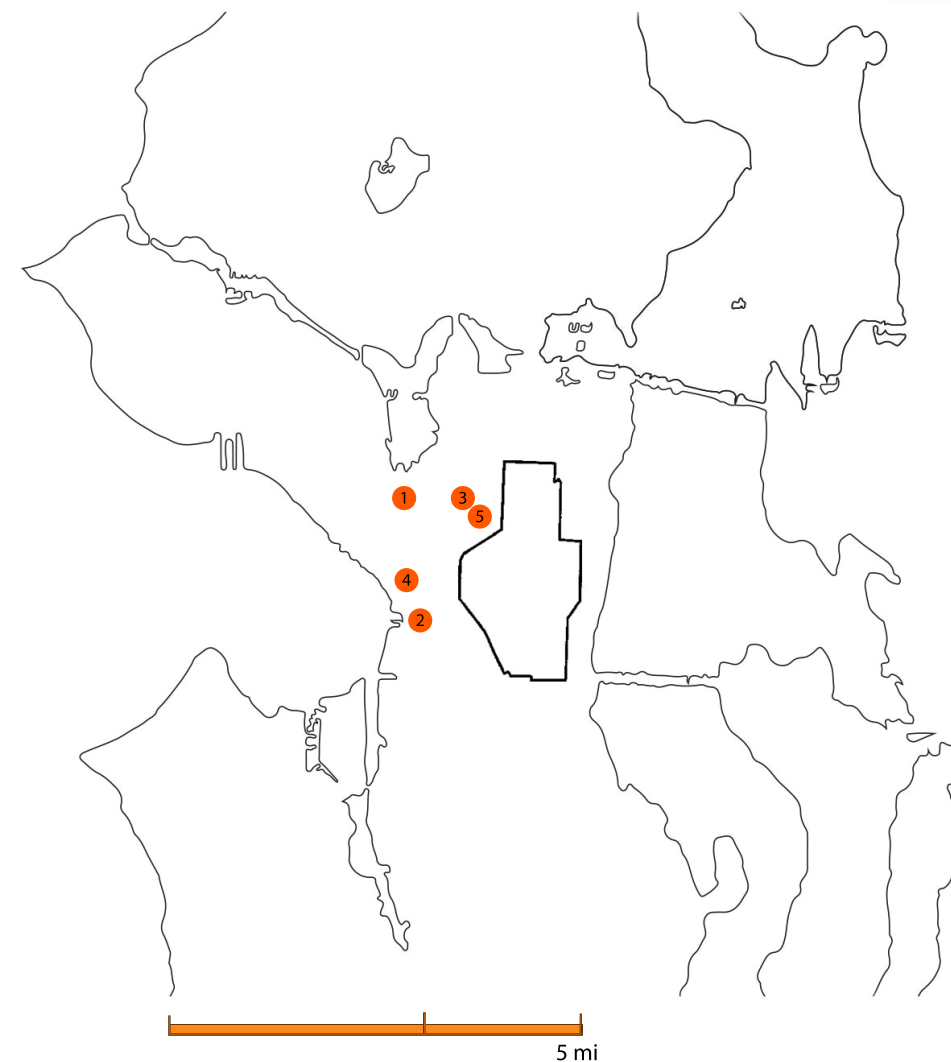
2014 Population by Age  
5 Mile Radius of 23rd and Union



Educational Attainment by Place of Birth, 1980 and 2006-2010  
Seattle Metro



## Co-Working Comps Seattle City



- wework**  
500 Yale Avenue North  
Seattle, WA 98109

Office: \$550 / Mo  
Labs: \$400 / Mo  
Commons: \$45 / Mo
- IMPACT HUB Seattle**  
220 Second Ave South  
Seattle WA 98104

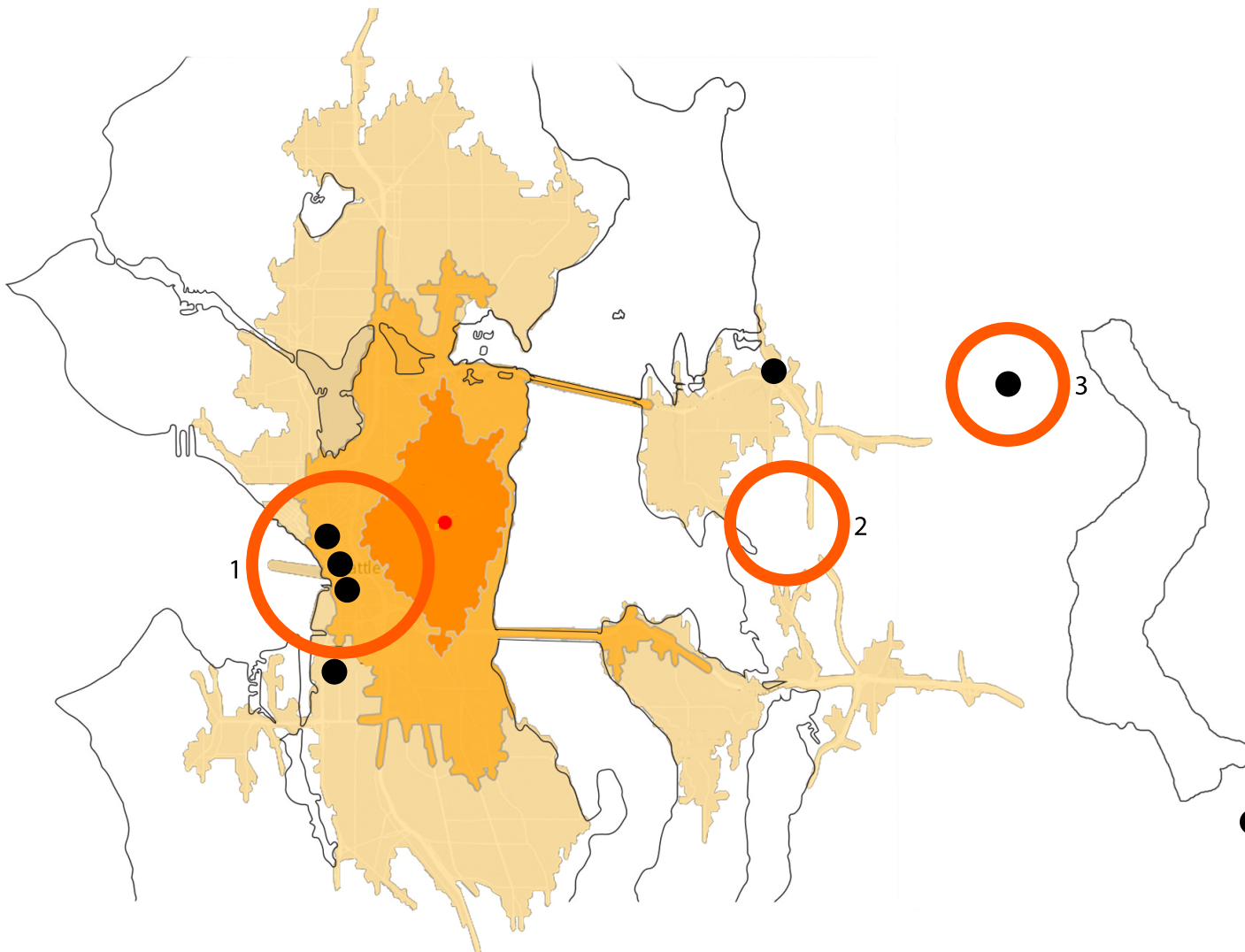
Full Time Desk: \$425 / Mo  
Complete with full time desk: \$475 / Mo
- My Branch Office**  
1620 Broadway #207  
Seattle, WA 98122

Month to month : \$425 / Mo  
Six month membership: \$395 / Mo
- RED ELEMENT COLLECTIVE**  
1402 3rd Ave, SUITE 505  
Seattle, WA 98101

Month to month : \$425 / Mo  
Six month membership: \$395 / Mo
- AGNES UNDERGROUND**  
1433 12th Ave Ste A1  
Seattle, WA 98122

Fixed desk member : \$325 / Mo  
Flex desk: \$175 / Mo  
Daily rate: \$25  
Storage: \$10  
Mail Service: \$10

Regional Economic Base Employment Proximity to 23rd and Union



● **Fortune 500 Companies**

- Costco (#22)
- Microsoft (#35)
- Amazon (#49)
- Paccar (#168)
- Starbucks (#208)
- Nordstroms (#227)
- Weyerhaeuser (#363)

○ **Regional Job Centers**

1. Seattle CBD
2. Bellevue CBD
3. Redmond/Microsoft

**Drive Times**

- 5 Min.
- 10 Min.
- 15 Min.

**Bus Times**

- 10 - 15 Min.
- 15 - 30 Min.
- 30 - 50 Min.



[Design+Development] Demonstration

**Residential**

Total Residential:	75,808 sf.
Building 2:	41,680 sf.
Market Rate:	34,504 sf.
MFTE:	7176 sf.
Building 3:	31,962 sf.
Market Rate:	26,645 sf.
MFTE:	5,317 sf.

**Design Goals:** Enhances sense of community and belonging as opposed to isolation.

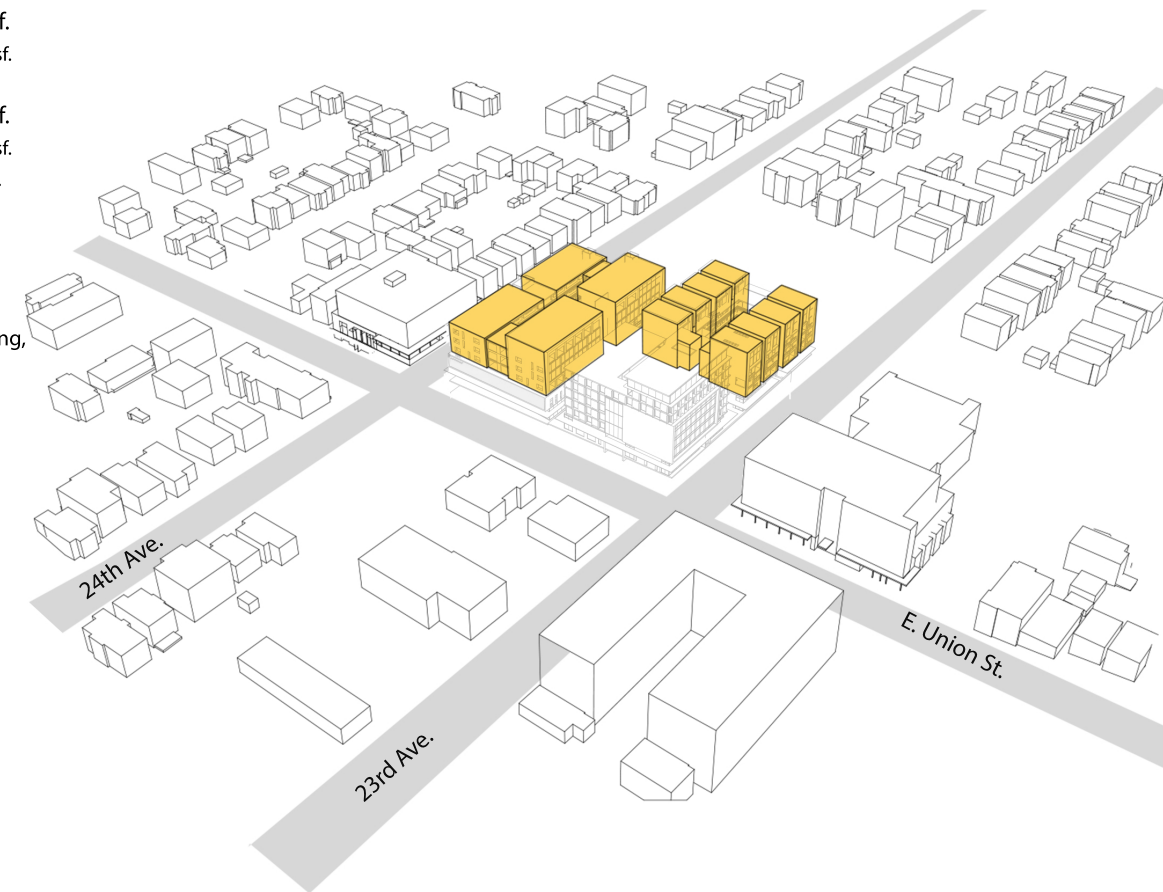
Provide natural ventilation, daylighting, and access to nature for all units

Encourage a mix of lifestyles and diversity.

**Development Goals:** Provide for a mix of tenant user groups by maintaining a healthy mix of unit types.

Address affordability by creating small yet efficient units.

Establish a "growth sweet spot" that connects people through transit to jobs.

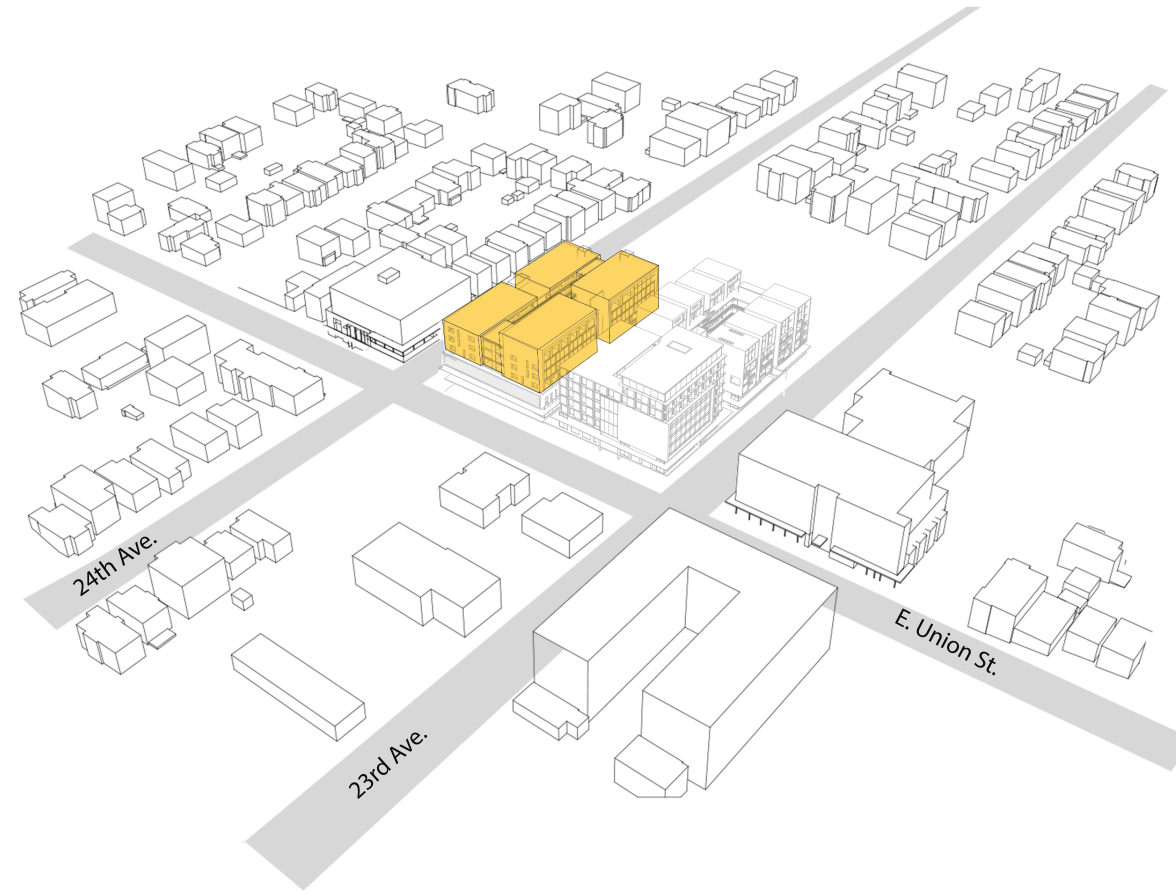
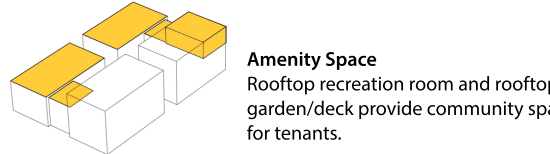
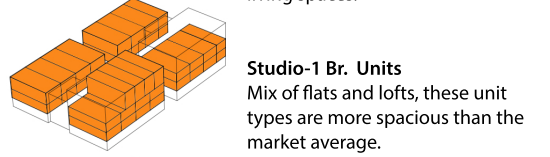
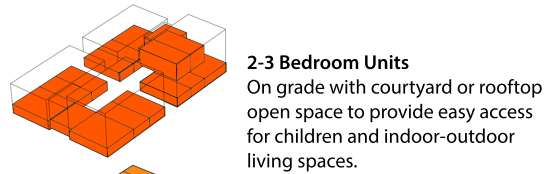
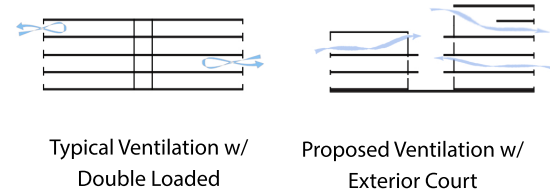




# [Design+Development] Demonstration

## Residential

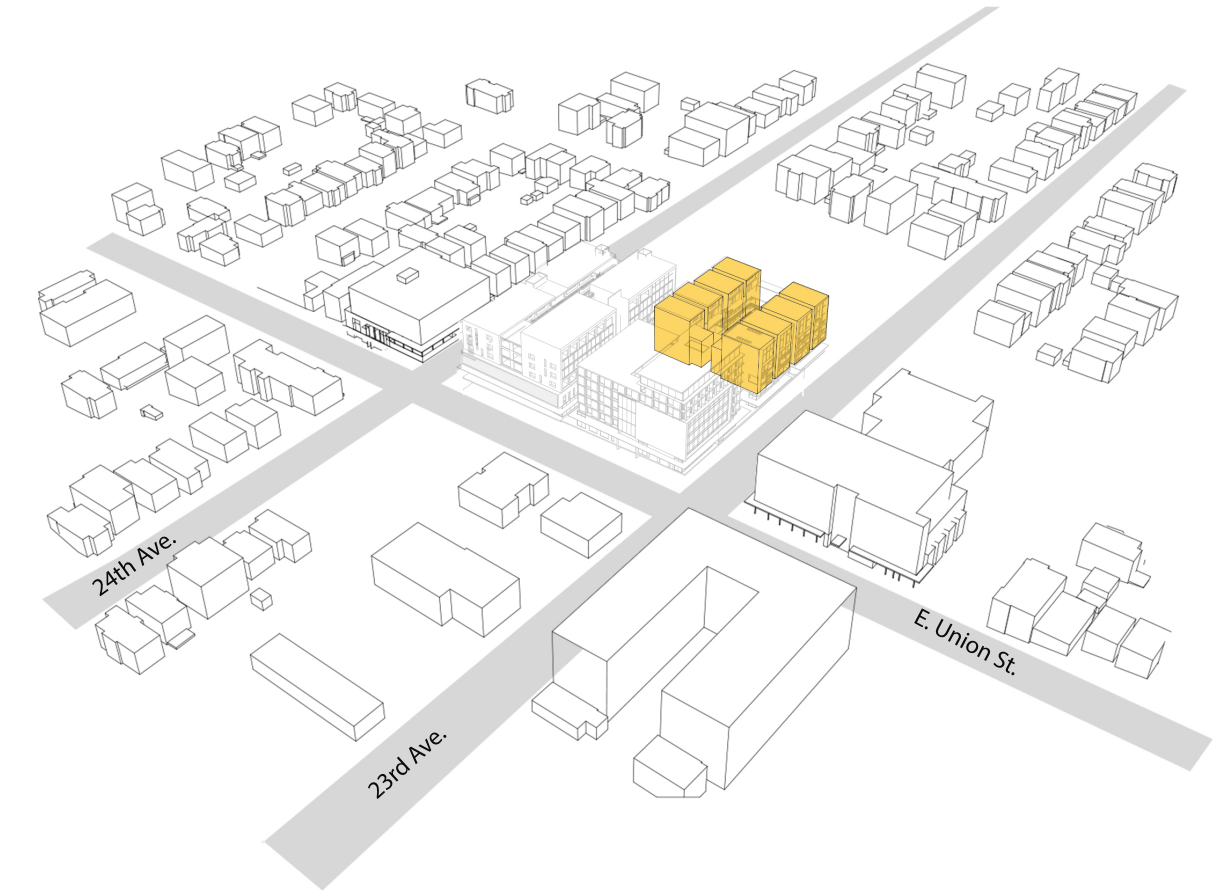
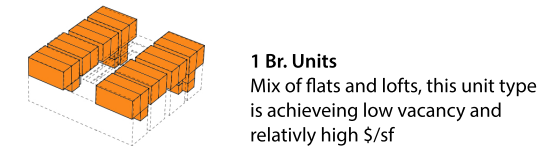
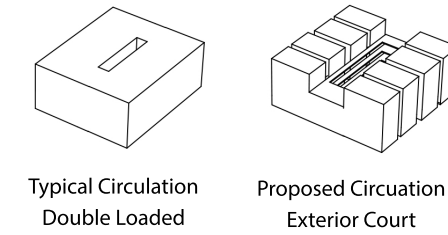
2323 E. Union St. Building 2  
41,680 sf.



# [Design+Development] Demonstration

## Residential

8-Bit Apartments Building 3  
31,962 sf.





# Neighborhood Commercial Comps Seattle City



Wally Apartments  
4111 Stone Way N  
2013



Footprint Wallingford  
4516 Meridian Ave N Existing  
2013



Duo  
8026 15th Ave NW  
2014



Queen Anne Towne  
1900 Queen Anne Ave N  
2014



The Central (Under Construction)  
2203 E Union St  
2015








Intracorp Admiral (Proposed)  
3210 California Ave SW  
2016



## Chapter 9 Project Design

### Ground Level Uses and Circulation

-  Retail
-  Residential Lobby
-  Anchor Grocery
-  Vehicular Access/Egress
-  Pedetrian Flows

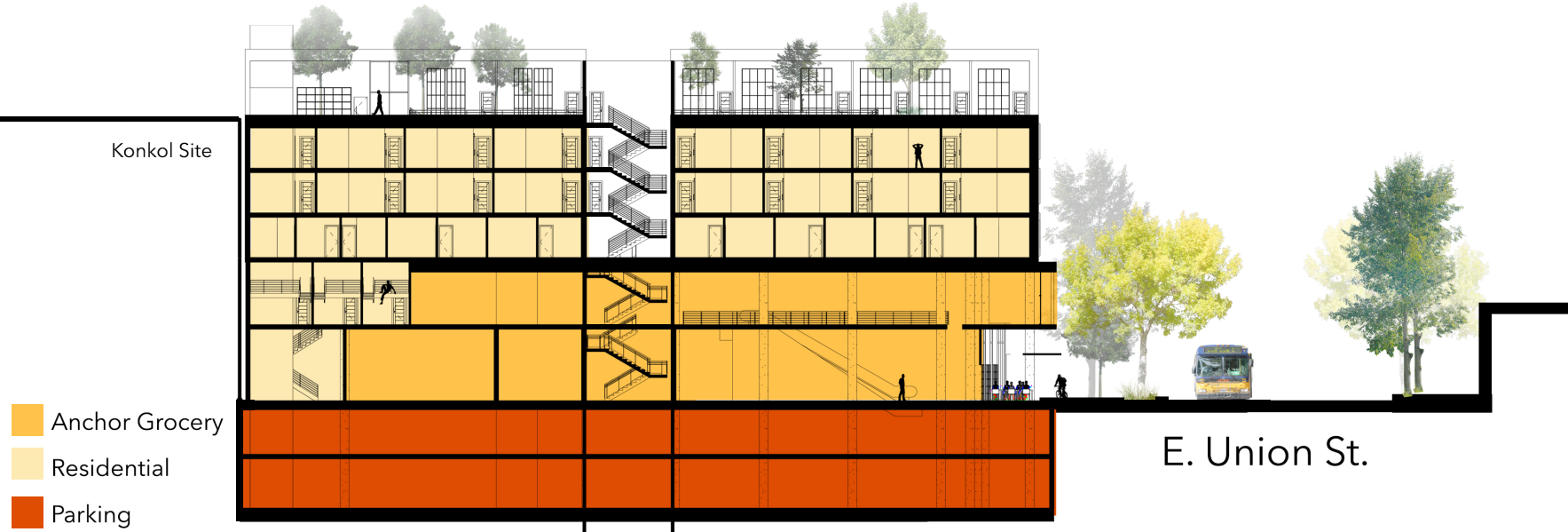




[Design + Development] Demonstration

88

### Section Looking West



[Design + Development] Demonstration

89

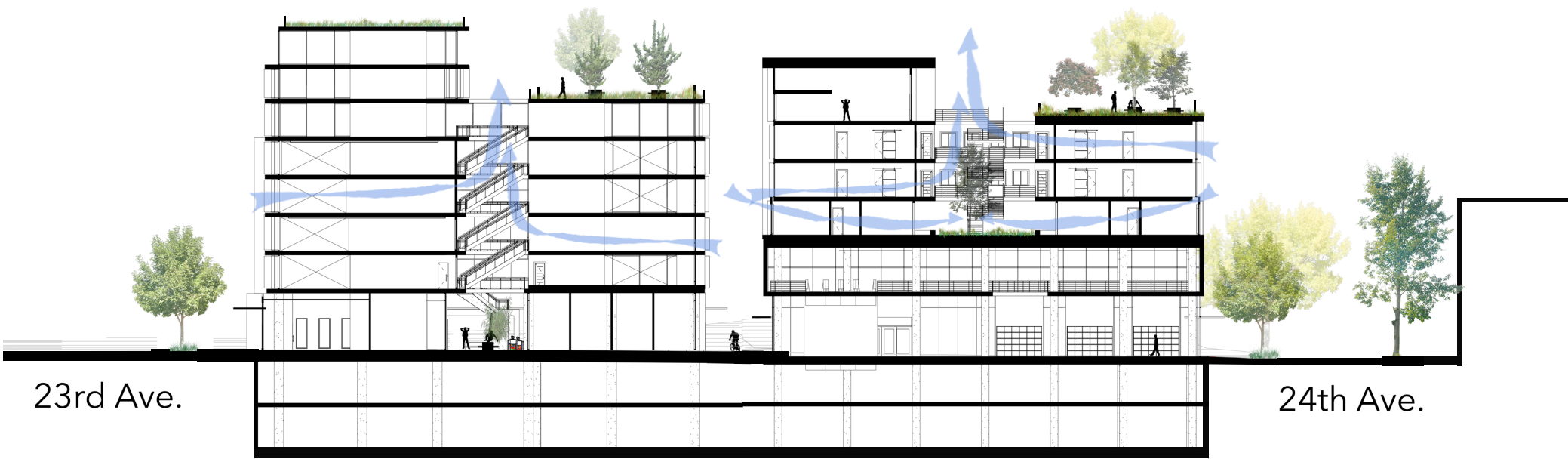
### Section Looking East





[Design + Development] Demonstration

### Section Looking North



[Design + Development] Demonstration

### Site 1

13,753 sf

[Co Working + Office + Retail]

Retail: 5,968 sf  
 Co Working Office: 22,861sf  
 Market Rate Office: 23,270 sf

Total SF: 56,394 sf

NC3 85' Allowable: 82,518 sf  
 NC3 65' Allowable: 61,888 sf





[Design + Development] Demonstration

Site 1

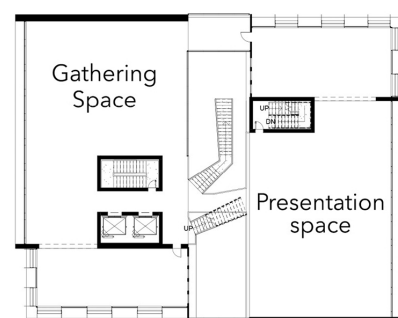
13,753 sf

[Co Working + Office + Retail]

Retail: 5,968 sf  
Co Working Office: 22,861sf  
Market Rate Office: 23,270 sf

Total SF: 56,394 sf

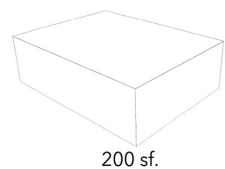
NC3 85' Allowable: 82,518 sf  
NC3 65' Allowable: 61,888 sf



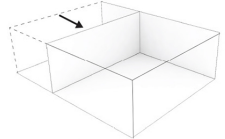
Scale: 1/32" = 1'-0"  
0' 16'-0 32'-0" 64'-0"

Large Gathering and Presentation Space

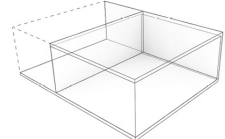
10-30 Person



200 sf.



Adjustable Space



Insert Features

Features



Event Hosting



A/V Services



Flexible Seating

Biophilia Elements



Natural Ventilation



Daylighting



[Design + Development] Demonstration

Site 1

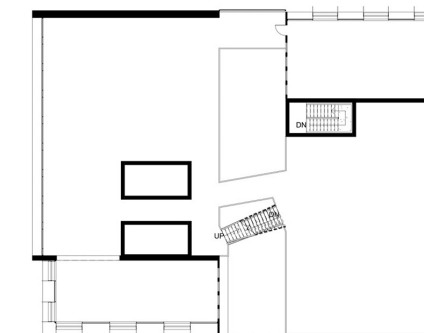
13,753 sf

[Co Working + Office + Retail]

Retail: 5,968 sf  
Co Working Office: 22,861sf  
Market Rate Office: 23,270 sf

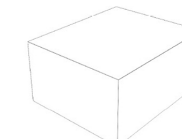
Total SF: 56,394 sf

NC3 85' Allowable: 82,518 sf  
NC3 65' Allowable: 61,888 sf



Scale: 1/32" = 1'-0"  
0' 16'-0 32'-0" 64'-0"

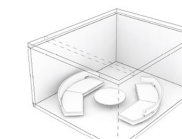
Team Rooms  
2-4 Person



200 sf.



Open/Close walls



Insert Features

Features



Work Tables



White Board Wall



Projector



Lounge Seating

Biophilia Elements



Natural Patterns



Terrariums



Natural Ventilation



Daylighting



[Design + Development] Demonstration

Site 1

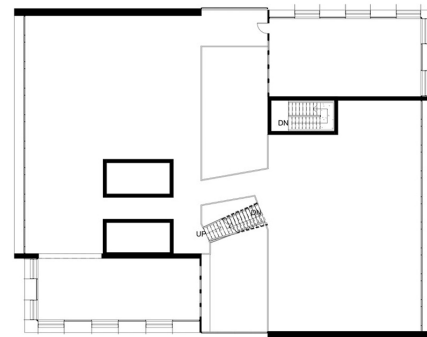
13,753 sf

[Co Working + Office + Retail]

Retail: 5,968 sf  
Co Working Office: 22,861sf  
Market Rate Office: 23,270 sf

Total SF: 56,394 sf

NC3 85' Allowable: 82,518 sf  
NC3 65' Allowable: 61,888 sf



Scale: 1/32" = 1'-0"  
0' 16'-0 32'-0" 64'-0"

Open Work Space  
1-125 Person



Features



Computers for rent



Variety of workdesks

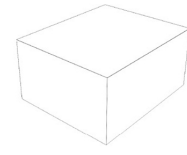
Biophilia Elements



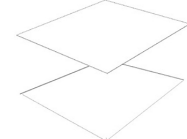
Natural ventilation



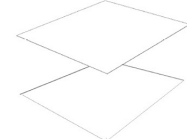
Plants throughout



6000 sf.



Open



Insert Features



[Design + Development] Demonstration

Site 1

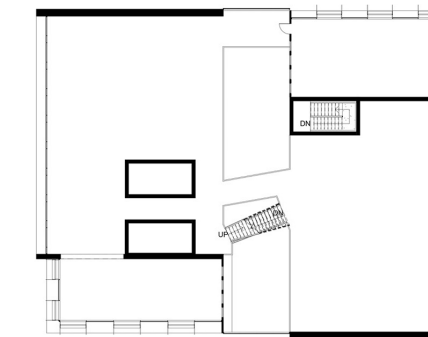
13,753 sf

[Co Working + Office + Retail]

Retail: 5,968 sf  
Co Working Office: 22,861sf  
Market Rate Office: 23,270 sf

Total SF: 56,394 sf

NC3 85' Allowable: 82,518 sf  
NC3 65' Allowable: 61,888 sf



Scale: 1/32" = 1'-0"  
0' 16'-0 32'-0" 64'-0"

Focus Rooms +  
Private Workspace  
1 Person



Features



Sit Stand Desk



Buffered Acoustics

Biophilia Elements



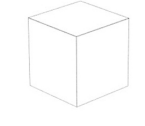
Natural Materials



Plants



Natural Ventilation



60 sf.



Flexible Walls



Convertible Space



[Design + Development] Demonstration

**Site 2**  
19,568 sf

[Multifamily + Anchor Grocery]

Anchor Grocery: 28,806 sf  
Residential: 58 Units

Total SF: 75,475 sf

NC3 85' Allowable: 117,408 sf  
NC3 65' Allowable: 88,056 sf



[Design + Development] Demonstration

**Site 2**  
19,568 sf

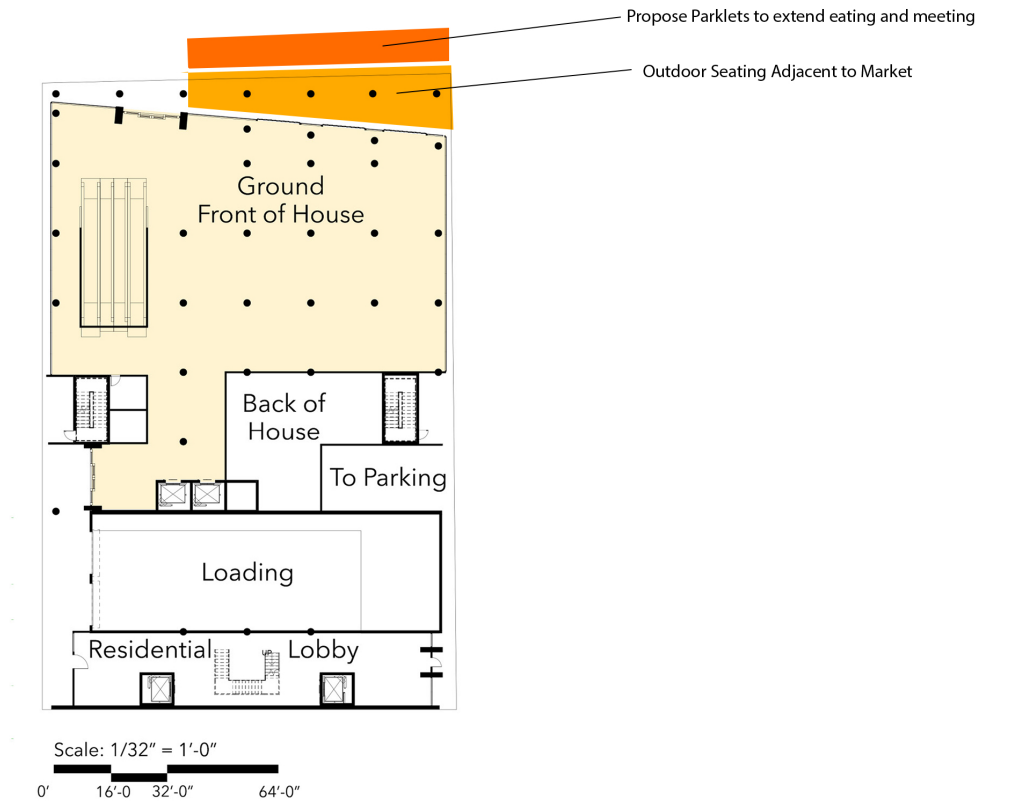
[Multifamily + Anchor Grocery]

Anchor Grocery: 28,806 sf  
Residential: 58 Units

Total SF: 75,475 sf

NC3 85' Allowable: 117,408 sf  
NC3 65' Allowable: 88,056 sf

1





[Design + Development] Demonstration

**Site 2**  
19,568 sf

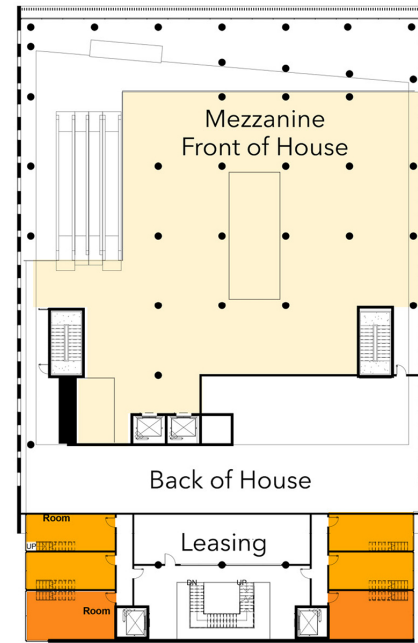
[Multifamily + Anchor Grocery]

Anchor Grocery: 28,806 sf  
Residential: 58 Units

Total SF: 75,475 sf

NC3 85' Allowable: 117,408 sf  
NC3 65' Allowable: 88,056 sf

**2**



Studio Loft  
400 sf  
\$3.00/sf  
\$1200/mo



Single Person

Loft  
500 sf  
\$3.00/sf  
\$1500/mo



Single Person



Couple

Scale: 3/64" = 1'-0"  
0' 10'-8 21'-4 42'-8"



[Design + Development] Demonstration

**Site 2**  
19,568 sf

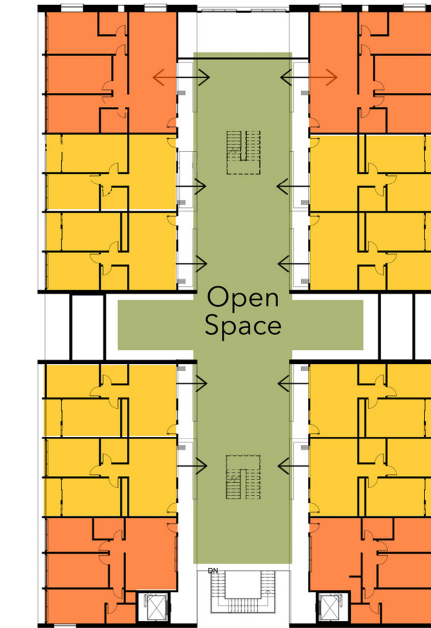
[Multifamily + Anchor Grocery]

Anchor Grocery: 28,806 sf  
Residential: 58 Units

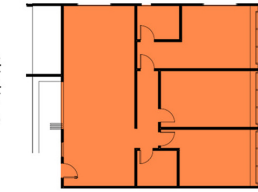
Total SF: 75,475 sf

NC3 85' Allowable: 117,408 sf  
NC3 65' Allowable: 88,056 sf

**3**



3 Br. 2 Ba.  
1226 sf  
\$2.50/sf  
\$3,065/mo



3-4 Person Family

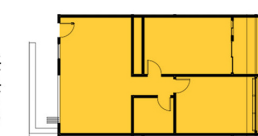


3 Friends/Professionals



Couple + 2 Friends

2 Br. 1 Ba.  
850 sf  
\$3.00/sf  
\$2550/mo



2-3 Person Family



2 Friends/Professionals



[Design + Development] Demonstration

### Site 2

19,568 sf

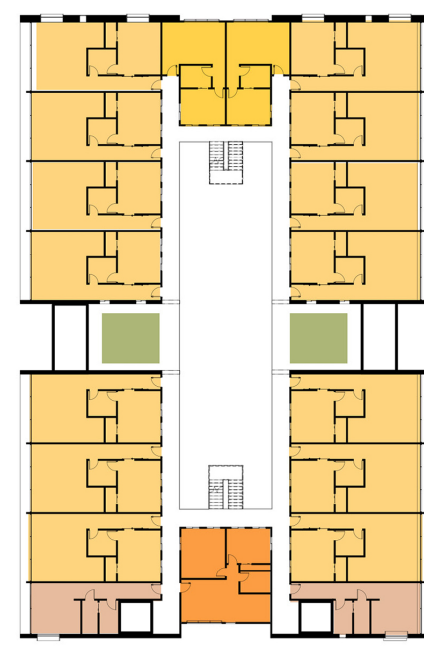
[Multifamily + Anchor Grocery]

Anchor Grocery: 28,806 sf  
Residential: 58 Units

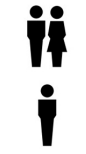
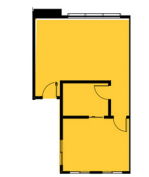
Total SF: 75,475 sf

NC3 85' Allowable: 117,408 sf  
NC3 65' Allowable: 88,056 sf

**4**

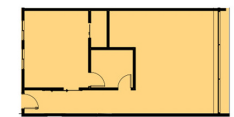


1 Br. Mini  
432 sf  
\$3.06/sf  
\$1324/mo



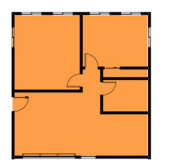
Couple  
Single Person

1 Br. Flat  
700 sf  
\$3.00/sf  
\$2100/mo



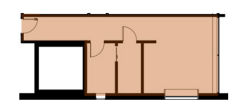
Couple  
Single Person

2 Br. 1 Ba.  
656 sf  
\$2.42/sf  
\$1588/mo



3-4 Person Family  
2 Friends

Studio  
400 sf  
\$2.75/sf  
\$1100/mo



Single Person

100



[Design + Development] Demonstration

### Site 2

19,568 sf

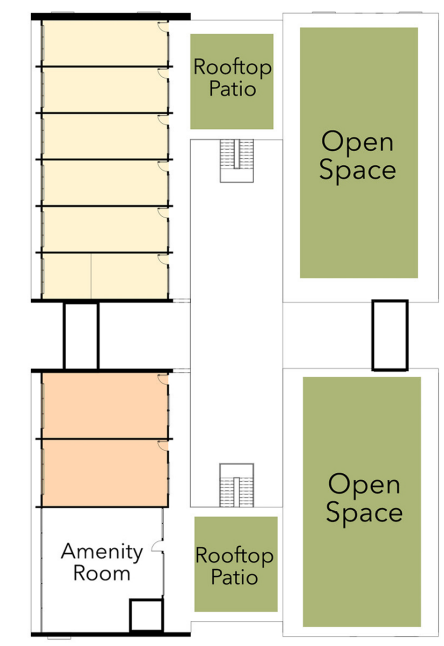
[Multifamily + Anchor Grocery]

Anchor Grocery: 28,806 sf  
Residential: 58 Units

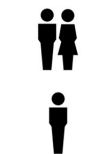
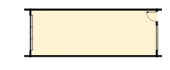
Total SF: 75,475 sf

NC3 85' Allowable: 117,408 sf  
NC3 65' Allowable: 88,056 sf

**5**

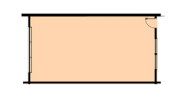


1 Br. Loft  
670 sf  
\$3.00/sf  
\$2010/mo



Couple  
Single Person

2 Br. 1 Ba.  
800 sf  
\$3.10/sf  
\$2480/mo



3-4 Person Family  
2 Friends

**User Group**

101



[Design + Development] Demonstration

Site 3

13,455 sf

[Multifamily + Neighborhood Retail]

Retail: 6,104 sf  
Residential: 54 Units

Total SF: 44,985 sf



[Design + Development] Demonstration

Site 3

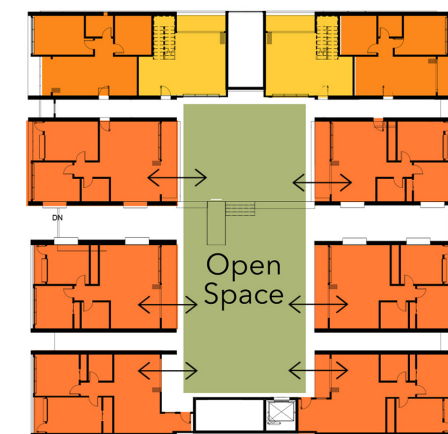
13,455 sf

[Multifamily + Neighborhood Retail]

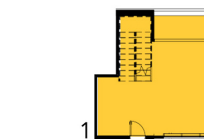
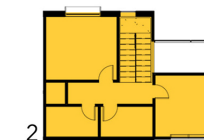
Retail: 6,104 sf  
Residential: 54 Units

Total SF: 44,985 sf

2



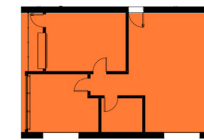
2 Br. 2 Ba.  
975 sf  
\$2.88/sf  
\$2808/mo



2 Br. 1 Ba.  
651 sf  
\$2.44/sf  
\$1588/mo



2 Br. 1 Ba.  
835 sf  
\$3.00/sf  
\$2505/mo



3-4 Person Family



2 Friends/Professionals



Couple



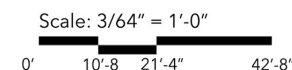
2 Friends/Professionals



3 Person Family



2 Friends/Professionals





[Design + Development] Demonstration

104

Site 3

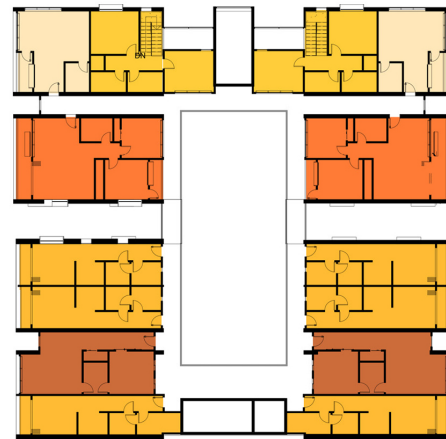
13,455 sf

[Multifamily + Neighborhood Retail]

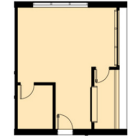
Retail: 6,104 sf  
Residential: 54 Units

Total SF: 44,985 sf

3

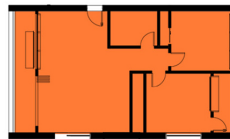


Studio  
420 sf  
\$3.00/sf  
\$1245/mo



Single Person

2 Br. 1 Ba.  
835 sf  
\$3.00/sf  
\$2505/mo



3 Person Family



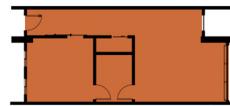
3 Friends/Professionals

Studio  
415 sf  
\$3.00/sf  
\$1245/mo



Single Person

1 Br.  
555 sf  
\$3.00/sf  
\$1665/mo



Single Person



Couple



[Design + Development] Demonstration

105

Site 3

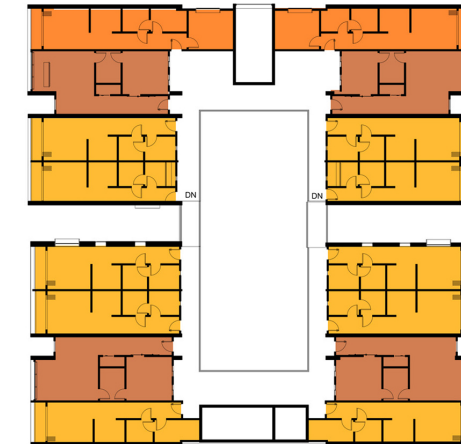
13,455 sf

[Multifamily + Neighborhood Retail]

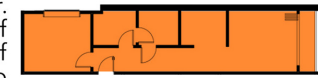
Retail: 6,104 sf  
Residential: 54 Units

Total SF: 44,985 sf

4



1 Br.  
515 sf  
\$2.59/sf  
\$1324/mo



Single Person



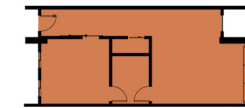
Couple

Studio  
415 sf  
\$3.00/sf  
\$1245/mo



Single Person

1 Br.  
555 sf  
\$3.00/sf  
\$1665/mo



Single Person



Couple



[Design + Development] Demonstration

**Site 3**  
13,455 sf

[Multifamily + Neighborhood Retail]

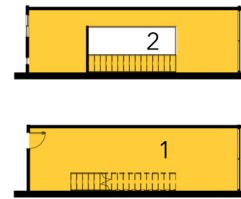
Retail: 6,104 sf  
Residential: 54 Units

Total SF: 44,985 sf

**5**



1 Br. Loft  
670 sf  
\$3.10/sf  
\$2015/mo



**User Group**

Couple

Single Person



[Design + Development] Demonstration







## Chapter 10 Project Finance

**Site 1**  
13,753 sf

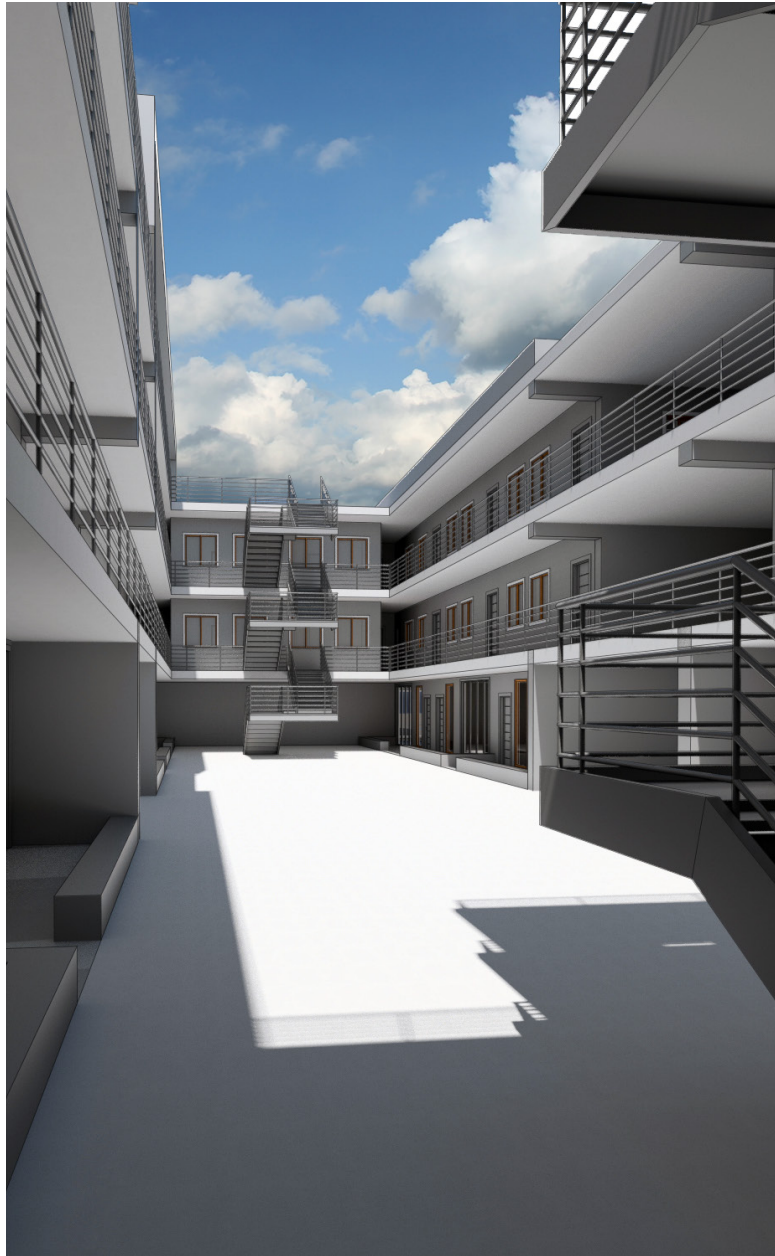
### INCOME PROFORMA

Rental	Amount	unit	Rent/Cost	Subtotals	TOTALS
Gross Rent Roll					\$ 2,471,848
Residential					
Total Apartments		0 Apts			
Commercial					
Office	46,131	SF			
Co Working				\$ 807,568	
2nd Floor	7,433	SF	@ \$ 267,588		
3rd Floor	7,433	SF	@ \$ 260,155		
4rd Floor	7,995	SF	@ \$ 279,825		
Market Rate				\$ 882,830	
5th Floor	7,995	SF	@ \$ 295,815		
6th Floor	7,995	SF	@ \$ 295,815		
7th Floor	3,640	SF	@ \$ 145,600		
8th Floor	3,640	SF	@ \$ 145,600		
Anchor Retail					
Neighborhood Retail	5,968			\$ 209,725	
Suite 100	1,959	SF	@ \$ 72,483		
Suite 101	1,460	SF	@ \$ 54,020		
Suite 102	613	SF	@ \$ 22,681		
Suite 103	308	SF	@ \$ 10,780		
Suite 104	352	SF	@ \$ 10,560		
Suite 105	355	SF	@ \$ 10,650		
Suite 106	231	SF	@ \$ 7,161		
Suite 107	229	SF	@ \$ 7,099		
Suite 108	229	SF	@ \$ 7,099		
Suite 109	232	SF	@ \$ 7,192		
Parking					
Short Term Ratio	40%				
Stalls	55	Spaces	@ \$ 5,475	\$ 301,125	
Residential Parking Ratio	0%				
Stalls	0	Spaces	@ \$ 2,700		
Office Parking Ratio	60%				
Stalls	82	Spaces	@ \$ 3,300	\$ 270,600	
Less Vacancy/Credit Loss					\$ (193,056)
Residential Tenants	5%		@ \$ -	\$ -	
Office	10%		@ \$ 1,690,398	\$ (169,040)	
Retail Tenants	5%		@ \$ 209,725	\$ (10,486)	
Residential Parking	5%		@ \$ -	\$ -	
Office Parking	5%		@ \$ 270,600	\$ (13,530)	
Less Operating Expenses					\$ (417,608)
Residential					
Payroll	\$ 1,500	\$/Unit/Yr		\$ -	
Utilities	\$ 600	\$/Unit/Yr		\$ -	
Landscaping	\$ 100	\$/Unit/Yr		\$ -	
Unit turnover cost	\$ 125	\$/Unit/Yr		\$ -	
Maintenance	\$ 450	\$/Unit/Yr		\$ -	
Marketing	\$ 200	\$/Unit/Yr		\$ -	
Insurance	\$ 400	\$/Unit/Yr		\$ -	
Onsite Office	\$ 400	\$/Unit/Yr		\$ -	
Taxes	\$ 2,000	\$/Unit/Yr		\$ -	
Commercial					
Office	\$ 8.00	\$/SF/Yr		\$ (369,048)	
Neighborhood Retail	\$ 1.25	\$/SF/Yr		\$ (7,460)	
Parking	\$ 300	\$/stall/year		\$ (41,100)	
<b>NET OPERATING INCOME</b>					<b>\$ 1,861,184</b>
Value	5.50%	Cap			\$ 33,839,708

Gross Rent Roll: **\$2,471,848**

NOI: **\$1,861,184**

Value @ 5.5% CAP:  
**\$33,839,708**





Site 1

COST PROFORMA					
Rental					
	Amount	unit		Subtotals	TOTALS
<b>Development Hard Costs</b>					
Land Acquisition	\$ 210	SF	@	13,753	\$ (2,888,130)
Demo/Site Prep	\$ 10	SF	@	13,753	\$ (137,530)
Office	\$ 250	SF	@	46,131	\$ (11,532,750)
Residential	\$ 210	SF	@	-	\$ -
Retail	\$ 200	SF	@	5,968	\$ (1,193,600)
Pk Structure	\$ 14,000	\$/Stall	@	137	\$ (1,918,000)
Pk Automation Equipment	\$ 16,000	\$/Stall	@	137	\$ (2,192,000)
Infrastructure & Open Space	\$ 50		@	5,000	\$ (250,000)
Contingency-Hard Costs	5%		@	\$(20,112,010)	\$ (1,005,601)
					\$ (7,292,734)
<b>Development Soft Costs</b>					
Contractor Fee	\$	(20,112,010)	@	3.0%	\$ (603,360)
Civil/Enviro	\$	(20,112,010)	@	1.0%	\$ (201,120)
Engineer	\$	(20,112,010)	@	1.0%	\$ (201,120)
Architect	\$	(20,112,010)	@	4.0%	\$ (804,480)
Legal and Organizational	\$	(20,112,010)	@	1.0%	\$ (201,120)
Developers Fee	\$	(20,112,010)	@	3.5%	\$ (703,920)
Leasing Fees	\$	(20,112,010)	@	3.0%	\$ (603,360)
Other Consultants	\$	(20,112,010)	@	1.0%	\$ (201,120)
WSST	\$	(20,112,010)	@	9.5%	\$ (1,910,641)
Interest Reserve		Allow			\$ (1,392,107)
Loan Fee		Allow			\$ (198,872)
Contingency-Soft Costs	\$	(5,430,243)		5%	\$ (271,512)
<b>Total Project Costs</b>					\$ (28,410,345)
<b>Loan/Equity</b>					
Loan Amount	\$	(19,887,241)		70.0%	
Equity Required	\$	(8,523,103)		30.0%	
Land	\$	(2,888,130)			
Cash	\$	(5,634,973)			
<b>PROFITABILITY TEST</b>					
	Yield on Cost			6.6%	
	Cap Rate			5.50%	
	Market Value	\$	33,839,708		
	Total Profit	\$	5,429,364		
	Profit Margin		19%		
	Cash on Cash (Level)	\$	462,827	\$ (8,523,103)	5.4%

Hard Costs: \$21,117,611

Soft Costs: \$7,292,734

Total Project Cost: \$28,410,345

Equity Required: \$8,523,103



Site 2

INCOME PROFORMA					
Rental					
	Amount	unit	Rent/Cost	Subtotals	TOTALS
<b>Gross Rent Roll</b>					
					\$ 3,160,773
<b>Residential</b>					
Total Apartments		58 Apts			
Market Rate		46 Apts		\$ 1,237,002.24	
3 Br. 2 Ba.		4 Apts	@ \$ 14,124		
2 Br. 1 Ba.		8 Apts	@ \$ 20,400		
2 Br. 1 Ba. Loft		2 Apts	@ \$ 4,960		
1 Br. Flat		22 Apts	@ \$ 46,200		
1 Br. Loft		6 Apts	@ \$ 12,060		
Studio Loft		2 Apts	@ \$ 2,940		
Studio Loft		2 Apts	@ \$ 2,400		
MFT Apartments		12 Apts		\$ 194,880	
2 Br. 1 Ba.		2 Apts	@ \$ 3,176		
1 Br.		2 Apts	@ \$ 2,648		
1 Br. Flat		6 Apts	@ \$ 7,944		
Studio Loft		2 Apts	@ \$ 2,472		
<b>Commercial</b>					
Office	-	SF	@ 36	\$ -	
Anchor Retail	28,806	SF	@ 36	\$ 1,037,016	
Neighborhood Retail	-				
<b>Parking</b>					
Short Term Ratio		25%			
Stalls		49	@ \$ 5,475	\$ 268,275	
Residential Parking Ratio		50%			
Stalls		97	@ \$ 2,700	\$ 261,900	
Retail Parking Ratio		25%			
Stalls		49	@ \$ 3,300	\$ 161,700	
<b>Less Vacancy/Credit Loss</b>					\$ (158,039)
Residential Tenants	5%	@	\$ 1,431,882	\$ (71,594)	
Retail Tenants	5%	@	\$ 1,037,016	\$ (51,851)	
Residential Parking	5%	@	\$ 691,875.00	\$ (34,594)	
<b>Less Operating Expenses</b>					\$ (565,398)
<b>Residential</b>					
Payroll	\$ 1,500	\$/Unit/Yr		\$ (87,000)	
Utilities	\$ 600	\$/Unit/Yr		\$ (34,800)	
Landscaping	\$ 100	\$/Unit/Yr		\$ (5,800)	
Unit turnover cost	\$ 125	\$/Unit/Yr		\$ (7,250)	
Maintenance	\$ 450	\$/Unit/Yr		\$ (26,100)	
Marketing	\$ 200	\$/Unit/Yr		\$ (11,600)	
Insurance	\$ 400	\$/Unit/Yr		\$ (23,200)	
Onsite Office	\$ 400	\$/Unit/Yr		\$ (23,200)	
Taxes	\$ 2,000	\$/Unit/Yr		\$ (116,000)	
<b>Commercial</b>					
Office	\$ 8.00	\$/SF/Yr		\$ -	
Anchor Retail	\$ 8.00	\$/SF/Yr		\$ (230,448)	
Neighborhood Retail	\$ 1.30	\$/SF/Yr		\$ -	
<b>NET OPERATING INCOME</b>					\$ 2,437,337
Value	6.00%	Cap			\$ 40,622,276

Gross Rent Roll: \$3,160,773

NOI: \$2,437,337

Value @ 6.0% CAP: \$40,622,279



### Site 2

COST PROFORMA					
Rental					
	Amount	unit		Subtotals	TOTALS
<b>Development Hard Costs</b>					
Land Acquisition	\$ 210	SF	@	19,568	\$ (4,109,280)
Demo/Site Prep	\$ 10	SF	@	19,568	\$ (195,680)
Office	\$ 220	SF	@		\$
Residential	\$ 210	SF	@	41,680	\$ (8,752,800)
Retail	\$ 200	SF	@	28,806	\$ (5,761,200)
Pk Structure	\$ 14,000	\$/Stall	@	195	\$ (2,730,000)
Pk Automation Equipment	\$ 16,000	\$/Stall	@	195	\$ (3,120,000)
Infrastructure & Open Space	\$ 50		@	7,000	\$ (350,000)
Contingency-Hard Costs		5%	@	\$ (25,018,960)	\$ (1,250,948)
<b>Development Soft Costs</b>					
Contractor Fee	\$	(25,018,960)	@	3.0%	\$ (750,569)
Civil/Enviro	\$	(25,018,960)	@	1.0%	\$ (250,190)
Engineer	\$	(25,018,960)	@	1.0%	\$ (250,190)
Architect	\$	(25,018,960)	@	4.0%	\$ (1,000,758)
Legal and Organizational	\$	(25,018,960)	@	1.0%	\$ (250,190)
Developers Fee	\$	(25,018,960)	@	3.5%	\$ (875,664)
Leasing Fees	\$	(25,018,960)	@	2.0%	\$ (500,379)
Other Consultants	\$	(25,018,960)	@	1.0%	\$ (250,190)
WSST	\$	(25,018,960)	@	9.5%	\$ (2,376,801)
Interest Reserve		Allow			\$ (1,718,119)
Loan Fee		Allow			\$ (245,446)
Contingency-Soft Costs	\$	(6,504,930)		5%	\$ (325,246)
<b>Total Project Costs</b>					
					\$ (35,063,648)
<b>Loan Requirements</b>					
Loan Amount	\$	(24,544,554)		70.0%	
Equity Required	\$	(10,519,095)		30.0%	
Land	\$	(4,109,280)			
Cash	\$	(6,409,815)			
<b>PROFITABILITY TEST</b>					
	Yield on Cost			7.0%	
	Cap Rate			6.00%	
	Market Value	\$	40,622,276		
	Total Profit	\$	5,558,628		
	Profit Margin		16%		
	Cash on Cash (Level	\$	499,887	\$ (10,519,095)	4.8%

Hard Costs: \$26,269,908

Soft Costs: \$8,793,740

Total Project Cost: \$35,063,648

Equity Required: \$10,519,095



### Site 3

INCOME PROFORMA					
Rental					
	Amount	unit		Subtotals	TOTALS
<b>Gross Rent Roll</b>					
					\$ 1,800,612
<b>Residential</b>					
Total Apartments		54 Apts			
Market Rate		43 Apts		\$ 968,892	
2 Br. 2 Ba.		2 Apts	@ \$ 5,616		
2 Br. 1 Ba.		8 Apts	@ \$ 20,040		
1 Br. Loft		16 Apts	@ \$ 32,240		
1 Br. Flat		4 Apts	@ \$ 6,660		
Studio		13 Apts	@ \$ 16,185		
MFTE Apartments		11 Apts		\$ 173,712	
2 Br. 1 Ba.		2 Apts	@ \$ 3,176		
1 Br. Flat		2 Apts	@ \$ 2,648		
Studio		7 Apts	@ \$ 8,652		
<b>Commercial</b>					
Office	-	SF	@	36 \$	-
Anchor Retail	-	SF	@	25 \$	-
<b>Neighborhood Retail</b>					
Suite 200	5,873	963 SF	@	34 \$	32,742
Suite 201		405 SF	@	30 \$	12,150
Suite 202		410 SF	@	30 \$	12,300
Suite 203		868 SF	@	34 \$	29,512
Suite 204		672 SF	@	30 \$	20,160
Suite 205		753 SF	@	25 \$	18,825
Suite 206		891 SF	@	34 \$	30,294
Suite 207		911 SF	@	25 \$	22,775
<b>Parking</b>					
Short Term Ratio		25%			
Stalls		34	@	\$ 5,475	\$ 186,150
Residential Parking Ratio		50%			
Stalls		67	@	\$ 2,700	\$ 180,900
Retail Parking Ratio		25%			
Stalls		34	@	\$ 3,300	\$ 112,200
<b>Less Vacancy/Credit Loss</b>					
					\$ (90,031)
<b>Residential Tenants</b>					
		5%	@	\$ 1,142,604	\$ (57,130)
<b>Retail Tenants</b>					
		5%	@	\$ 178,758	\$ (8,938)
<b>Parking</b>					
		5%	@	\$ 479,250	\$ (23,963)
<b>Less Operating Expenses</b>					
					\$ (319,485)
<b>Residential</b>					
Payroll	\$	1,500	\$/Unit/Yr		\$ (81,000)
Utilities	\$	600	\$/Unit/Yr		\$ (32,400)
Landscaping	\$	100	\$/Unit/Yr		\$ (5,400)
Unit turnover cost	\$	125	\$/Unit/Yr		\$ (6,750)
Maintenance	\$	450	\$/Unit/Yr		\$ (24,300)
Marketing	\$	200	\$/Unit/Yr		\$ (10,800)
Insurance	\$	400	\$/Unit/Yr		\$ (21,600)
Onsite Office	\$	400	\$/Unit/Yr		\$ (21,600)
Taxes	\$	2,000	\$/Unit/Yr		\$ (108,000)
<b>Commercial</b>					
Office	\$	8.00	\$/SF/Yr		\$ -
Anchor Retail	\$	1.25	\$/SF/Yr		\$ -
Neighborhood Retail	\$	1.30	\$/SF/Yr		\$ (7,635)
<b>NET OPERATING INCOME</b>					
					\$ 1,391,097
Value	6.00%	Cap			\$ 23,184,942

Gross Rent Roll: \$1,800,612

NOI: \$1,391,097

Value @ 6.0% CAP: \$23,184,942



# Site 3

COST PROFORMA				
Rental				
	Amount	unit		TOTALS
Development Hard Costs				\$ (13,408,416)
Land Acquisition	\$ 210	SF	@	\$ (2,825,550)
Demo/Site Prep	\$ 10	SF	@	\$ (134,550)
Office	\$ 220	SF	@	\$ -
Residential	\$ 210	SF	@	\$ (6,712,020)
Retail	\$ 200	SF	@	\$ (1,174,600)
Pk Structure	\$ 14,000	\$/Stall	@	\$ (753,480)
Pk Automation Equipment	\$ 16,000	\$/Stall	@	\$ (861,120)
Infrastructure & Open Space	\$ 50		@	\$ (308,600)
Contingency-Hard Costs	5%		@	\$ (638,496)
Development Soft Costs				\$ (4,701,468)
Contractor Fee	\$ (12,769,920)	@	3.0%	\$ (383,098)
Civil/Enviro	\$ (12,769,920)	@	1.0%	\$ (127,699)
Engineer	\$ (12,769,920)	@	1.0%	\$ (127,699)
Architect	\$ (12,769,920)	@	4.0%	\$ (510,797)
Legal and Organizational	\$ (12,769,920)	@	1.0%	\$ (127,699)
Developers Fee	\$ (12,769,920)	@	3.5%	\$ (446,947)
Leasing Fees	\$ (12,769,920)	@	3.5%	\$ (446,947)
Other Consultants	\$ (12,769,920)	@	1.0%	\$ (127,699)
WSST	\$ (12,769,920)	@	9.5%	\$ (1,213,142)
Interest Reserve	Allow			\$ (887,384)
Loan Fee	Allow			\$ (126,769)
Contingency-Soft Costs	\$ (3,511,728)		5%	\$ (175,586)
Total Project Costs				\$ (18,109,884)
Loan Amount	\$ (12,676,919)		70.0%	
Equity Required	\$ (5,432,965)		30.0%	
Land	\$ (2,825,550)			
Cash	\$ (2,607,415)			
PROFITABILITY TEST				
Yield on Cost			7.7%	
Cap Rate			6.00%	
Market Value	\$ 23,184,942			
Total Profit	\$ 5,075,058			
Profit Margin			28%	
Cash on Cash (Level	\$ 285,307		\$ (5,432,965) 5.3%	

Hard Costs: \$13,408,416

Soft Costs: \$4,701,468

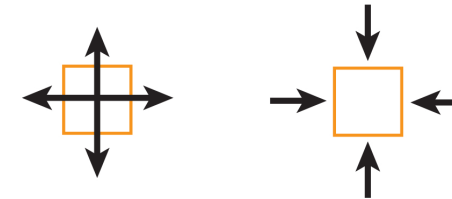
Total Project Cost: \$18,109,884

Equity Required: \$5,432,965

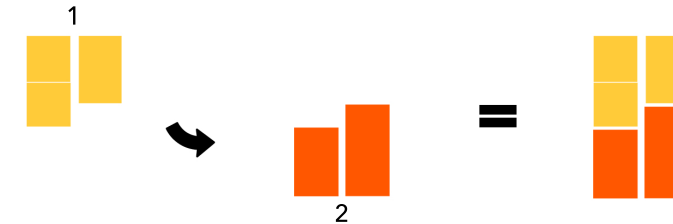


# Development Goals

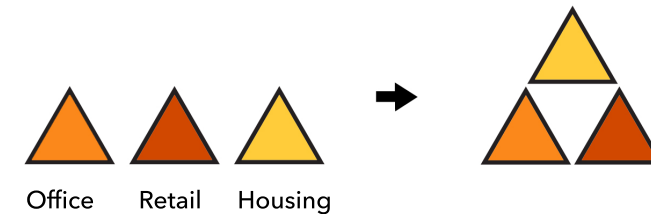
## 1 Transform 23rd and Union from a transit route into a destination



## 2 Finance development phase 2 with phase 1



## 3 Develop a synergistic mixed use community

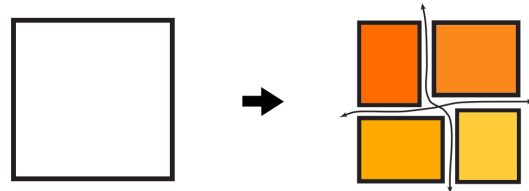




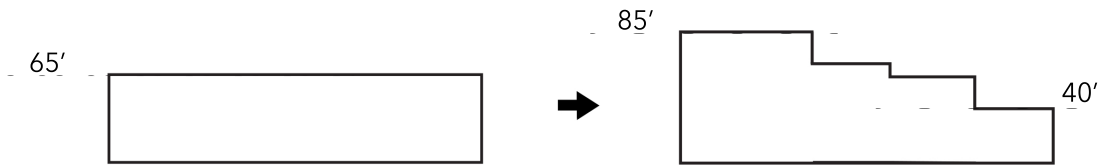
## Design Goals

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### 1 Ground level permeability



### 2 Precision density



### 3 Equitable access



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Appendix

**THIS CUSTOM REPORT WAS PREPARED ON May 7, 2015 BY:**

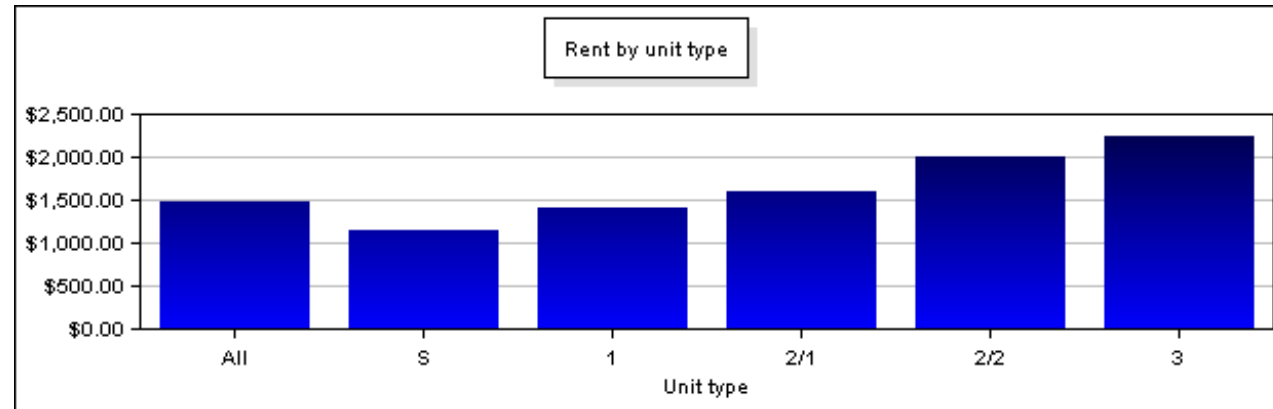
Stephen O'Connor  
WCRER/Runstad Center for RE  
PO Box 355740 Seattle WA 98195  
phone: (206) 685-9989 email: [steveoco@uw.edu](mailto:steveoco@uw.edu)

**CUSTOM REPORT CRITERIA USED:**

**Area:** Central  
**Survey Group:** 03/01/2015

**MARCH 2015 SURVEY RESULTS:**

We surveyed 42 market rate properties with a total of 2,519 units in the "Central" market area for our March 2015 apartment rent and vacancy survey of 20-unit and larger properties. The "market" vacancy rate was 4.4%. That is 0.6 percentage points higher than the five-year average vacancy rate of 3.8%. The market vacancy rate excludes vacancies in new construction still in lease-up. The "gross" vacancy rate was 7.1%. The gross rate includes vacancies in new construction still in lease-up. The average rent, for all unit types combined, was \$1,487 in March 2015, compared to \$1,082 five years earlier. Rents increased 37.4% over the past five years.



March 2015 rent and vacancy detail for Central						
Property age group: All Years						
	All	S	1	2/1	2/2	3
<b>Market vacancy</b>	4.4%	4.7%	5.3%	2.3%	2.4%	0.0%
<b>Average rent</b>	\$1,487	\$1,144	\$1,425	\$1,611	\$2,016	\$2,244
<b>Rent per NRSF</b>	\$2.10	\$2.35	\$2.16	\$1.82	\$2.05	\$1.92
<b>Buildings surveyed</b>	42	29	40	22	17	8
<b>Units surveyed</b>	2,519	640	1,084	307	419	25

Appendix

**SUBSCRIBER RENTAL MARKET TRENDS REPORT SURVEY RESULTS**

Prepared on January 22, 2015  
by Stephen O'Connor WCRER/Runstad Center for RE

Source: The Apartment Vacancy Report

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CUSTOM REPORT CRITERIA USED:				
Area: Central, Survey Group: 5 Years				
Rental Market Trends for Central				
Survey Date	Market Vacancy %	Average Rent	% Offering Incentives	Rent Increase Planned
9/1/14	3.70%	\$1,446	2.60%	3.80%
3/1/14	3.30%	\$1,415	5.40%	3.60%
9/1/13	3.00%	\$1,384	0.00%	4.20%
3/1/13	2.90%	\$1,310	2.90%	5.10%
9/1/12	3.00%	\$1,274	0.00%	4.30%
3/1/12	3.40%	\$1,232	11.40%	4.40%
9/1/11	3.60%	\$1,169	6.50%	4.00%
3/1/11	4.30%	\$1,052	27.30%	2.90%
9/1/10	4.50%	\$1,073	23.30%	2.00%
3/1/10	5.60%	\$1,082	68.80%	0.00%
9/1/09	7.70%	\$1,050	58.10%	-0.40%
<b>Averages</b>	<b>4.10%</b>	<b>\$1,226</b>	<b>4.10%</b>	<b>3.08%</b>

CUSTOM REPORT CRITERIA USED:						
Area: Central, Survey Group: 2014-09-01 00:00:00.0						
September 2014 rent and vacancy detail for Central						
Property age group: All Years						
	All	S	1	2BR - 1BA	2BR - 2BA	3
<b>Market vacancy</b>	3.70%	3.50%	3.80%	3.70%	3.90%	0.00%
<b>Average rent</b>	\$1,446	\$1,131	\$1,380	\$1,534	\$1,934	\$2,191
<b>Rent per NRSF</b>	\$2.06	\$2.32	\$2.11	\$1.78	\$1.98	\$1.88
<b>Buildings surveyed</b>	42	29	40	21	18	8
<b>Units surveyed</b>	2,502	652	1,048	277	456	25
Property age group: 2010 & Newer						
	All	S	1	2BR - 1BA	2BR - 2BA	3
<b>Market vacancy</b>	6.40%	7.80%	7.80%	8.30%	0.00%	na
<b>Average rent</b>	\$1,669	\$1,343	\$1,665	\$1,683	\$2,034	na
<b>Rent per NRSF</b>	\$2.23	\$2.40	\$2.37	\$1.97	\$1.97	\$0.00
<b>Buildings surveyed</b>	5	5	5	3	4	na
<b>Units surveyed</b>	637	166	282	72	101	na

Appendix

CoStar Group  
Q4 2014 Seattle/Puget Sound Office Market  
Capitol Hill/Central Market

		Existing Inventory		Vacancy		YTD Net Absorption	YTD Deliveries	Under Const. SF	Quoted Rates		
		# of Bldgs	Total RBA	Direct SF	Total SF				Vac %		
Class A	Cap Hill / Central	3	307,648	43,378	51,327	16.7%	4,108	-	-	\$ 37.41	\$ 37.41
	Seattle CBD	42	20,791,288	2,591,005	2,793,894	13.4%	51,668	-	1,041,936	\$ 37.50	
	S Seattle	8	1,425,004	387,060	387,060	27.2%	268,447	-	-	\$ 38.11	
	Lake Union	29	6,020,788	166,789	187,448	3.1%	374,173	380,000	2,455,619	\$ 41.50	
Class B	Capitol Hill/Central.	81	3,969,748	258,646	260,907	6.6%	40,963	-	19,644	\$ 40.69	\$ 40.69
	Seattle CBD	55	6,046,287	798,221	798,221	13.2%	31,654	-	-	\$ 29.37	
	S Seattle	80	2,110,402	301,011	302,034	14.3%	88,384	-	-	\$ 25.15	
	Lake Union	92	5,563,854	472,531	506,103	9.1%	103,579	-	-	\$ 28.77	
Class C	Capitol Hill/Central	136	1,473,965	20,667	20,667		19,699	-	-	\$ 27.64	\$ 27.64

Use This \$ 35.25

CoStar Group  
Q4 2014 Seattle/Puget Sound Retail Market  
Capitol Hill/Central Market

		Existing Inventory		Vacancy		YTD Net Absorption	YTD Deliveries	Under Const. SF	Quoted Rates		
		# of Bldgs	Total RBA	Direct SF	Total SF				Vac %		
General Retail	Cap Hill / Central	390	2,742,448	68,116	77,073	2.8%	64,118	63,134	-	\$ 31.46	\$ 31.46
	Seattle CBD	55	2,308,135	10,386	30,877	1.3%	16,395	-	-	\$ 33.00	
	S Seattle	637	4,176,548	92,428	94,578	2.3%	11,050	-	8,000	\$ 19.81	
Shopping Center	Capitol Hill/Central	12	282,897	-	-	0.0%	6,895	-	-	\$ 36.17	\$ 36.17
	Seattle CBD	3	449,763	47,145	47,145	10.5%	1,818	-	-	\$ 25.00	
	S Seattle	43	1,017,708	32,054	32,054	3.1%	20,080	-	-	\$ 15.29	
Retail	Capitol Hill/Central	403	3,025,345	68,116	77,073	2.5%	71,013	63,134	-	\$ 31.73	\$ 31.73

Puget Sound Property  
Q4 2014 Puget Sound Retail Market

Retail	Seattle	3130	26,460,440	662401	696694	2.6%				\$ 24.14	
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Use This 33.12

Appendix

**CONSTRUCTION LOAN CALCULATION**

Interest Only	Loan to Cost Ratio		70%
	Interest Rate		3.50%
	Loan Fee		1%
	Term		24 month
	Basis	\$	(19,887,241)
	Annual Payment	\$	696,053
<b>Construction Cost Before Financing</b>			
		\$	(28,410,345)
	Financing Costs	Loan Amount	Rate
	Interests Reserve	\$ (19,887,241)	3.50% \$ (1,392,107)
	Loan Fee	\$ (19,887,241)	1% \$ (198,872)
	Total Financing Costs		\$ (1,590,979)
	Total Project Costs (Financed)		\$ (30,001,324)
		Total Project Costs	LTC Loan Amount
	Loan Amount	\$ (28,410,345)	70% \$ (19,887,241.24)
Debt	\$	(19,887,241)	
Equity Required	\$	(10,114,083)	
Land		#REF!	
Cash		#REF!	
<b>T.O LOAN CALCULATION</b>			
	Loan to Value Ratio		70%
	Debt Service Coverage Ratio		1.25
	Cap Rate		5.50%
	Interest Rate		4.25%
	Loan Fee		1%
	Term		10
	Amortization		30
	Basis	\$	23,687,796
	Annual Payment	\$	(1,398,357)
	Balance end of year 10	\$	19,964,094 year 8, because of 2-year Construction
<b>Debt Service Check</b>			
	NOI		\$ 1,861,184
	Available to Service Debt	1.25	\$ 1,488,947
	Trial Loan Amount		\$ 25,222,376
<b>Loan To Value Check</b>			
	NOI		\$ 1,861,184
	Value	5.50%	\$ 33,839,708
	Trial Loan Amount	70%	\$ 23,687,796
<b>T.O. Loan Amount</b>			
			\$ 23,687,796



Thank You!

