The Use of Patient Capital to Promote Real Estate Development in Walkable Communities

Francisco Traverso Gianini

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Jan Whittington

George Rolfe

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Abstract

THE USE OF PATIENT CAPITAL TO PROMOTE REAL ESTATE DEVELOPMENT IN WALKABLE COMMUNITIES

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As expressed by several authors, walkability was essential on pre-industrial cities; streets were by necessity walkable, since everyone depended upon ready access by foot to jobs and the marketplace. Almost every use and activity had to be connected by a continuous pedestrian path. Because of industrialization and the need for efficiency, this type of fabric was replaced for an auto-dependent development type. The city grid became less connected and interactive, with streets used as service roads that connected residential zones with areas devoted to exclusive uses such as commercial or industrial.

Today, there is growing evidence on the adverse impacts of this type of development and, an increasing understanding of the benefits of walkable communities, where the concept of walkable neighborhoods is receiving an important amount of attention because evidence suggests that a neighborhood's socio-physical structure is highly related public health, with walkable neighborhoods providing not only health related benefits, but also increasing social and economic development.

This study explores how different policies related to real estate development, which provide equity for construction, can be used as patient capital in the early stages of a project. When compared to the usual investment model, the use of patient capital is intended to increase a project's equity to face the higher cost of development in an urban walkable setting instead of suburban development and it provides a larger time frame that might allow that neighborhood to reflect the economic and social benefits of walkability.

As the analysis will show, when policies are bundled in a toolkit, sufficient patient capital can be raised for real estate development, where value is created through the larger holding period; however, this capital is available for any type of development, not promoting walkability and showing that specific policies have to be developed in order to ensure that funds are used for more and better walkable neighborhoods.

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CHAPTER 1: Introduction

As expressed by several authors, walkability was essential on pre-industrial cities; streets were by necessity walkable, since everyone depended upon ready access by foot or slow moving cart, wagon, or carriage for access to jobs and the marketplace (Southworth, 2005). Almost every use and activity had to be connected by a continuous pedestrian path. Because of industrialization and the need for efficiency, this type of fabric was replaced for an auto-dependent development type. The city grid became less connected and less interactive, with streets used as service roads that connected residential zones with areas devoted to exclusive uses such as commercial or industrial. As a result, the distances between places where people live, work, and play are often too great to walk. As an example, in the Seattle region, 85.5% of all work trips and 86.0% of all non-work trips are made in private vehicles (Frank et Al., 2007).

Today, there is growing evidence on the adverse impacts of this type of development and, an increasing understanding of the benefits of walkable communities, where the concept of walkable neighborhoods is receiving an important amount of attention because evidence suggests that a neighborhood's socio-physical structure may relate to physical activity for health and transportation purposes (Moudon et Al., 2006). Together with this, walkable neighborhoods have transformed into celebrated destinations that create a sense of place and promote economic development (Burden, 2001).

While the benefits of walkability have been widely discussed, information on how to address the issue is scarce. Most of the literature has a planning approach, where comprehensive plans enforce walkability through zoning; however, a key factor in the process is not being included: Financing. Walkable neighborhoods face an important challenge, where development in these areas is considered more expensive, with complex permitting processes, and of higher risk compared to suburban development (Leinberger, 2007).

The purpose of this study is to analyze patient capital as a potential tool to finance walkable neighborhoods. Patient capital is that part of the development financing structure that does not have a defined payback period. It is provided by either the long-term owners of a project or through government incentives that play a similar role (Leinberger, 2007). Since the overall costs of development increases in walkable neighborhood projects, patient capital is understood as added equity to the conventional project, not as a substitute of it, and is intended to pay the increased costs and mitigate the risks of walkable urbanism.

In order to address this issue, this study is focused in one specific project, Welch Plaza, a mixed use development containing 162 units of housing (apartment and condo units) and 18,000 square feet of commercial space, located in the core of the Central District, specifically, the corner of 23rd Ave and S Jackson St, area defined by the Department of Planning and Development (DPD) as the district's service center. As expressed by the developers, "this project was pursued in an effort to remove the obvious blight along the corner of 23rd Ave. & S. Jackson St., prior to the development of Welch Plaza, the site was the combination of a vacant lot and the vacant former Welch Hardware store."

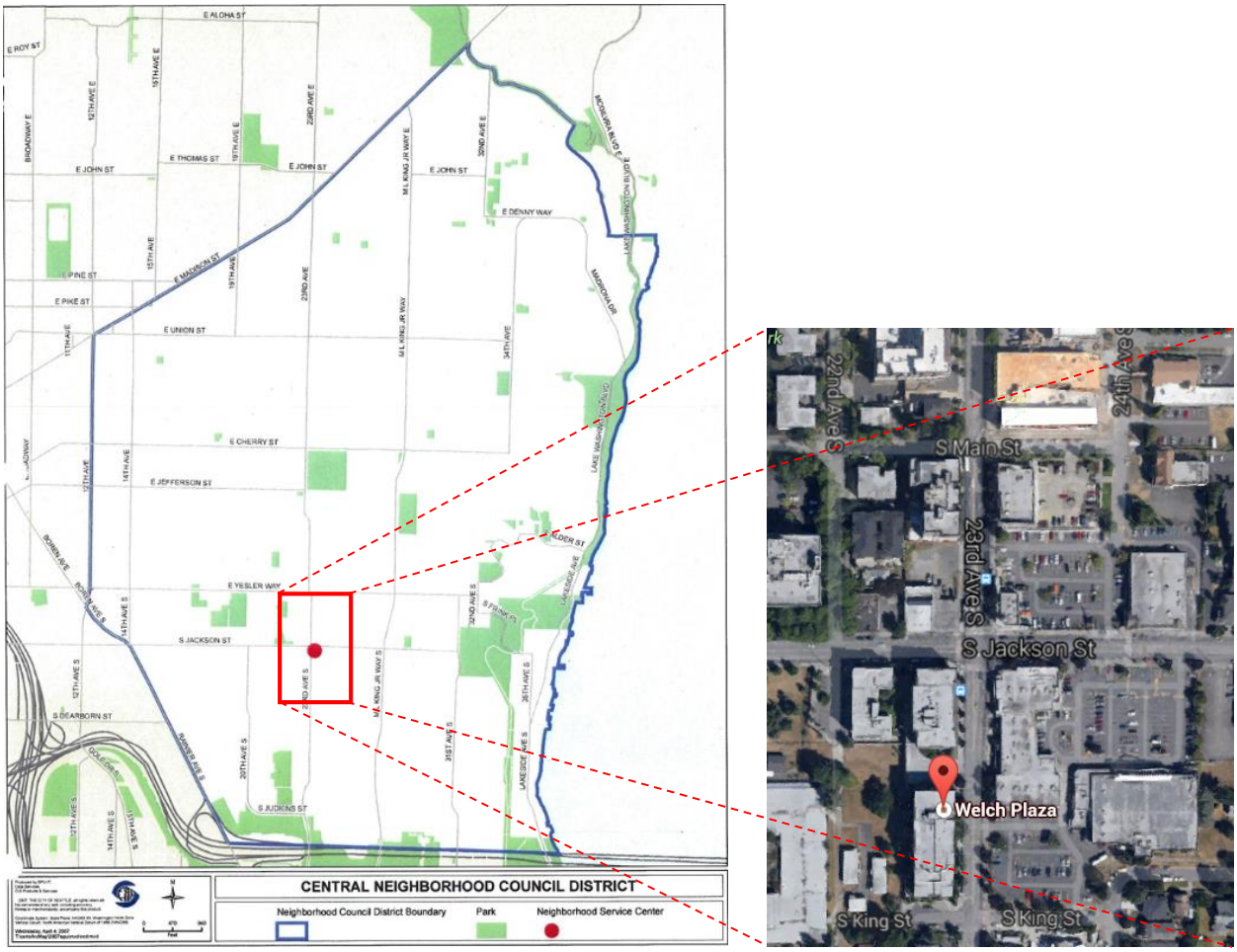

Figure 1-1, Central Neighborhood Council District (http://www.seattle.gov/neighborhoods/districts/central.htm)

Why this area? A brief description of the area is provided by DPD, referring to the Central Area District as one of Seattle's oldest and most diverse neighborhoods. The neighborhood is bounded to the north by East Madison Street, Interstate 90 to the south, Rainier Avenue/12th Avenue South to the west, and Lake Washington to the east. The city's African-American, Jewish, Japanese and Filipino communities all have deep roots in the Central Area (Seattle.Gov). One of its main strengths relies on the proximity of the neighborhood to the city's largest employment center: Downtown. Its location makes it easy to walk, bike or take transit to this area. Groceries, shopping, eating and playing are all within close reach from any Central District home (Fucoloro 2013).

As established by census data, until the 1990s, African-Americans made up the majority of the population; however today there has been a shift in demographics, where 58 percent of the residents are white and only 21.4 percent are African-American. Consequent with its history, the neighborhood still has many African-American-based institutions, like the Northwest African-American Museum, the Langston Hughes Cultural Arts Center, the Pratt Fine Arts Center, the Douglass-Truth Library, and the Medgar Evers Pool.

The area is designated as an Urban Village (Urban Center) in Seattle's zoning code. As expressed in Seattle's Comprehensive Plan (DPD, 2005), Urban Villages are community resources that enable the City to: deliver services more equitably, pursue a development pattern that is environmentally and economically sound, and provide a better means of managing growth and change through collaboration with the community in planning for the future of these areas. The urban village strategy is a comprehensive approach that is intended to maximize the benefit of public investment in infrastructure and services and promote collaboration with private interests and the community, to achieve mutual benefits. The whole concept behind the strategy is consequent with the purpose of this study, where it proposes to locate residents, jobs, stores and services in close proximity can reduce the reliance on cars for shopping and other daily trips. It also helps to decrease fossil fuels in the environment and makes public transportation more efficient and convenient (Ibid). These are intended to be the densest areas with the largest mix of uses in the city.

The City's Action Plan for 23rd Ave (DPD 2013), provides valuable information on the area. It found eight critical features, both positive and negative, that define the Central District, some of which have to be improved and some have to be at least maintained. These findings relate to: 1) Racial Diversity. With African American population declining by 26% while white population has increased by 66%; 2) Larger Household Renters, accounting 2.1 renters by household compared to 1.8 city wide; 3) Higher Renter

Rate, with a 54% total compared to 48% in the city as a whole; 4) Higher Vacancy Rate, 8.3% versus 3.1% in the city; 5) Less Car Dependent, 43% of workers use alternative means of transportation or Public Transportation for commuting, compared to 32% in the city as a whole; 6) Lower Housing Affordability, where 48% of households pay more than 30% of income for rent (city accounts for 41%); 7) Lower Education Attainment, with a 9% lower that the city's (46% in Central District) and; 8) Service Oriented Employment, where 67% of jobs are services, 15% higher than the city as a whole.

Development patterns for the area show single family housing as the predominant use, with a 25% of all uses, where multifamily housing accounts for 15% of all uses. When it comes to commercial uses, 23rd Ave is the main commercial corridor of the area. This type of development is clustered along 23rd Ave, specifically in the corners of Union St, Cherry St and Jackson St. Total commercial uses account for a 7.6%. Finally, vacant land totals a 4.4%, excluding green space or open space areas.

Despite of all the activity that's been in place for the last ten years, with a significant increase in mixed use type development, the area still lacks of the necessary elements to define it as a walkable community, where much of the development that is in place happened before 2008 and with a significant amount of vacant lots in the surroundings of the corner of 23rd Ave and Jackson St and with an important existence of buildings whose configuration responds to a car dependent development type instead of a walkable oriented development.

More investment has to be attracted to the neighborhood in order to achieve this goal. But how we encourage and promote development in an urban setting that hasn't been able to fully address the walkability issue in the last ten years? Unfortunately, developers look for profitable investment, and a brief look to the numbers behind a project like Welch Plaza show that there's not as much appreciation as one would like to have in a project like this, where rents in 2004 where projected to be "x" per sq ft with an appreciation rate of "y"; however reality shows a lower rate than the projected one.

Sometimes the answers are outside our context. Just as a reference, this study looks at another development in a totally different neighborhood, The Alcyone Apartments in South Lake Union (SLU). Also since 2004, SLU has been under a renovation process, an intensive one, with several residential, commercial and office buildings developed in the last ten years, replacing the old warehouse buildings and its consequent development type and transforming the area into one of the most desired neighborhoods in Seattle. One might argue that SLU is not the best example to compare any project with; however its great success and the significant increase in rents associated to its walkable development pattern provide an actual proof of how profitable it is to invest in this type of development under a long term strategy. As part of the study, and together with several policies that can be applied to address a patient capital investment in real estate, the Alcyone and SLU indicators and appreciation rates will be applied to Welch Plaza assumptions to simulate how feasible investment would have been in Central District under such an intensive development process that promotes the features of a walkable setting.

1.1 Research Design

This study aims to create synergy between planning and real estate. It addresses planning issues that can be resolved through the development of "good real estate" under a long term strategy. Today, most of the development occurs on a 3 to 5 five years process, where developers are looking for high returns through cash flow generated by the operation of the building and profit through sale proceeds. When it comes to this research, the proposal intends generate higher profit and higher cash flow as a premium obtained after a larger holding period when investing in urban settings in order to create walkable neighborhoods. The study seeks to resolve the following question:

How feasible is patient capital as a financial tool to promote development towards walkable neighborhoods?

The problem will be addressed using a causal comparative approach, where existing projects *proformas*, as conceived by the time of the development, will be evaluated using different forms of patient capital and evaluating the financial outcomes of those tools compared to what is in place today. The tools mentioned above consider the different parts that usually are considered as equity in a certain development together with policies related to affordable housing and retail (Low Income Housing Tax Credits and New Markets Tax Credits). In addition, the model includes financing assumptions that are supposed to be more flexible than the ones that were in place by the time of development when larger amounts of capital are added upfront in the development process.

Proformas are considered to be an estimate of the future economic performance of a given project (income stream, costs and future value), a tool which allows the implications of potentials to be analyzed (Rolfe 2012) and, therefore, a useful tool to evaluate the impact of the different policies as a patient capital resource. This study seeks to add to the existing literature that evaluates the benefits associated with development in walkable communities.

The upcoming chapters will present:

1. **The existing literature review on the subject:** Explores the benefits related to walkability from a planning and public health perspective. Then it briefly goes onto the basic drivers of real estate development to finally explore existing research related regarding the benefits to real estate when addressing walkability.
2. **Methodology:** Presents data from the existing project to be evaluated (original proforma and its market and growth assumptions); sub-market data from a comparable development and actual growth for 2004-2013 period; and finally, methods used to evaluate the different patient capital tools (sources of capital and policies) when applied to the original proforma, understood as a

financial feasibility analysis that will provide valuable information from each tool and the combination of them.

3. **Results:** Shows financial feasibility metrics obtained from each patient capital tool.
4. **Discussion:** Evaluates the findings of the previous chapter, the implications of each tool and, based on the financial metrics of them, suggests potential policy strategies to promote real estate development towards the creation of walkable communities.
5. **Conclusions:** Provides a brief summary of the key elements and facts to be remembered from the study. Proposes potential steps to address walkability as a main driver in real estate development.

CHAPTER 2: Literature Review

Excuse me, what? Walkability?

The question presented above is probably the most recurrent one when the purpose of the study was introduced to different people. The term has many interpretations according to different disciplines and does not have an accurate measure system. The following lines describe some of the concepts related to walkability and the most usual ways to measure it.

As explained in the *Walkability Scoping Paper* (Abley 2005); the technical words associated with walking have to cross professional disciplines, e.g. engineering, planning and health. These words also have to be understood by the community, and in fact have many have probably been developed in the community and picked up by practitioners. It is for this reason that words such as 'walkability' infer a certain meaning but without their correct definition confusion between these different disciplines can become apparent.

The term walkability is compounded of walk and ability (this last one being the noun of the word able). According to the Oxford English Dictionary, ability is described as the possession of the means (or skills) to do something. So, in a very simple way, we might understand walkability as having the necessary means to walk. On another definition, one that is particularly related to the purpose of this study, the Mayors of London Transport Strategy (Greater London Authority 2010), describes walkability as "the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport." This last definition is also supported by (Litman 2003), who defines walkability as "the quality of walking conditions, including factors such as the existence of walking facilities and the degree of walking safety, comfort and convenience."

The previous concepts might seem obvious; however, when looking at our built environment we can rarely see the appropriate means to execute our walking ability, streets with little or none connections at all, lack of sidewalks on large areas of the city, few services or programmatic areas to walk to, having large residential areas located outside the city boundaries or with commercial services concentrated in buildings on a "convenient" location for several neighborhoods that can be reach only by private means of transportation, specifically, by car.

But what is a walkable community? There are several definitions to the concept, where most of them measure walkable communities as those that have most amenities and services within 0.25 mile to 1 mile of distance (street network distance, not radius), where distances between 0.74 mile and 2 miles have been reported by several studies as walkable and bikable as conditioned by people's general health, perception, and attitude (Bernhoft 1998; USDOT 1995; Puget Sound Regional Council [PSRC] 2001, Moudon et Al., 2004). This kind of development is referred to very specific features and it translates into a district that is approximately 160 to 200 acres or 65 to 81 hectares. Within that district, most of daily needs can be met by walking. Inter-district transit may be used to expand the size of the district (Leinberger, 2007).

But what are those features? When looking at the available literature, there seems to be some agreement of what constitutes a walkable community, where most of the studies mention, together with the appropriate infrastructure, access to retail, services, parks and recreation as the key elements needed in neighborhood development that will promote a more walkable community. One description that is particularly accurate is the one provided by Lawrence D. Frank (Frank et Al., 2008), where walkable communities are described as the ones that have at least the following elements:

- Close-in location: Neighborhoods that are centrally located mean that commute distances will likely be shorter, with more convenient transit service.

- Compactly developed: Neighborhoods with higher residential densities put more people within walking distance of everyday goods and services.
- Mixed use: Neighborhoods with a mix of homes, shops, and services and other destinations within walking distance facilitate walking for everyday errands.
- Interconnected street networks: A “gridiron” street layout, as opposed to one dominated by cul de sacs and wide arterials, allows more direct connections between destinations. This is especially important to encourage walking trips.
- Pedestrian-friendly design: A landscape that is designed for pedestrians means narrower streets, wider sidewalks, easier and safer street crossings, and architecture that is easily accessible and visually engaging.

All these features together have been proven to foster walking, bicycling and using transit more than personal vehicles. An important factor related to the potential success of a walkable community is related to people’s behavior regarding means of transportation. It will be pointless to design walkable communities if people are no walking at all; however, information provided in 2009 by the National Household Travel Survey (USDOT, 2009) established walking as the second most important mean of transportation among Americans for the last 15 years. The survey showed that 30% of personal trips were less than 2 miles and 10% of those were less than half a mile (the magic number defined by practitioners as walkable distance across all generations). When looking at the composition of the personal trips, 11.5% of the trips were made by walking, 86.7% by personal vehicle and only 1.8% by transit. The numbers might seem discouraging; however, when compared to previous surveys, walking trips show a significant increase. In 2001, the same survey showed an 8.9% for walking trips and in 1995 a 5.7%. Transit remains as the less used means of transportation, with a 1.7% of total trips in 2001 and 1.9% in 1995. These results are showing something that is even more important; the small increase is

being subtracted not from transit but from personal vehicle trips and where an adequate transit system might help to make a greater dent.

Why walkability matters?

Today there is sufficient literature that demonstrates the benefits of walkable communities, where places designed to promote this type of behavior show greater economic development, an important impact on public health and many social benefits.

(Litman 2003), establishes that most travel surveys undercount non-motorized travel because they ignore short trips, non-work travel, travel by children, recreational travel, and non-motorized links, where most travel surveys classify trips as “automobile” or “transit” that are actually “automobile-walk,” or “walk-transit-walk.” The walking component is often ignored even if it takes place on public right-of-way and involves as much time as does a motorized link. These unintended mistakes undervalue the importance of non-motorized transportation and pose several problems to address walkability when making planning decisions. According to (Litman 2003), this results in:

- Shifts resources from walking facilities to roads and parking;
- Favors automobile-oriented land use patterns (wide roads, generous parking, low density, single-use) over pedestrian-oriented development;
- Undervalues traffic management practices that support walking, such as traffic calming; and
- Undervalues pedestrian safety investments.

As a consequence, resources devoted to transportation solutions, which are scarce and highly questioned by the public opinion, shift from pedestrian oriented to automobile oriented, resulting in budgets approving wider roads, large parking facilities (all features that create barriers to walkability)

and even in less funding for public transportation systems, which are highly related to non-motorized trips.

The information presented below is intended to briefly describe how walkability impacts each one of these areas, where the information provided intends to prove that walkable communities is not only a long desire outcome by planning practitioners, but also it creates synergies between different parties involved in the development of our built environment, and where real estate developers can obtain profit at the same time they create economic and social value.

2.1 Walkability and Public Health

Some people may ask themselves what planning has to do with health. The answers are many, from the definition of health to the history of planning. It's not the purpose of this study to talk about planning history or health concepts; however there are a few things we should know.

The World Health Organization (WHO, 2003), defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." As pointed by many authors, this definition goes beyond the bio-medical view and includes several dimensions to achieve human well-being. The field that addresses these non-medical needs at the community level is Public Health, where the interest is set on the population as a whole more than individuals. Public health is dedicated to fulfilling society's interest in assuring conditions in which people can be healthy, conditions that range from effective health care systems to healthy environments. As a discipline, public health has many sub-fields; Environmental Health is one of them and focuses on the relations between people and their environments, where in the last years it has addressed cross-cutting issues, including the built environment, climate change, and sustainability (Frumkin et Al., 2011).

As mentioned above, there is a relation between public health and the built environment; however today, planning practice has become so focused in land use issues that we have forgotten its origins as an answer to address severe public health problems that were happening because of the industrialization of cities. Over the past decade, this important relationship has a renewed interest given the existence of several studies that relate the built environment to our lifestyles. As explained by Lawrence D. Frank (Frank et Al., 2008), urban planning was itself a health response to the dreadful living conditions in the urban settlements of the early industrial era. It is indeed perplexing how far planning drifted away from its century-old public health roots. Plagued by overcrowding, lack of sanitation, and industrial pollution, planners created building regulations such as New York City's Tenement House Act of 1901, put in place "Euclidian" zoning to separate smokestacks from homes, and developed "garden cities" and "streetcar suburbs" as a refuge from city life that was, at the time, rather noxious and noisy. To the author, ironically, our failure to adapt the land development regulations and transportation facility design standards over time has resulted in the promulgation of health adverse environments as a norm and not the exception.

Concerned by the adverse effects of our current land use patterns in people's health, planning and health practitioners started to research about these effects, where recent publications have documented, among others, a relationship between urban sprawl and measures of health. These studies have incorporated multilevel analyses and strong controls for individual characteristics. More sprawling areas tend to be less walkable, often involving designs that incorporate cul-de-sacs, unconnected streets, and large lots. Results of these studies provide some support for the hypothesis that more walkable environments promote better health (Doyle et Al, 2007).

In 2006, (Lawrence D. Frank 2007) published a paper that studied the associations between land use patterns and its potential negative effects on health analyzing three pathways by which this may occur:

1) If the built environment reduces opportunity for active transportation, this may reduce total physical activity, and potentially increase risk for chronic disease; 2) If the built environment stimulates increased time spent in vehicles, it may reduce physical activity, and both of these may contribute to obesity, potentially increasing risk for chronic disease; 3) If the built environment stimulates increased vehicular travel, this may increase per capita vehicle emissions, and these may increase exposure to pollutants and risk of respiratory and cardiovascular ailments. The utilized data from the Neighborhood Quality of Life Study (NQLS), whose purpose was to examine the relationship of urban form to physical activity and obesity in King County and Seattle, and data from the King County Land Use, Transportation, Air Quality, and Health Study (LUTAQH), that was conducted to assess the effects of land use and transportation network design on travel patterns and per capita vehicle emissions, both assumed to influence air quality. The results of the study showed that people living in more walkable areas did more walking and biking for transportation and had lower body mass indexes (BMI). Given the fact that they drove less than people living in non-walkable areas, they also produced less air pollution, where the walkability index of a neighborhood was significantly related to BMI and active transportation among adults; however, walkability was more strongly associated with active transportation than with BMI. It is important to mention that not all the results showed beneficial outcomes, where higher concentrations of small particulate matter, linked to cardiovascular disease risk in some groups, was found in more walkable areas.

2.2 Walkability and Real Estate Development

As planners, we like to think that setting the rules for development will be enough to address the needs of the cities and its inhabitants; however, we are missing an important player in this game: Real Estate Developers. At the same time planners are creating zoning codes and regulations for the interest of all, real estate developers are seeking for opportunities to generate profit within the set of rules that the

planning agencies have set for them. As we have seen in the previous paragraphs, this game ended with great opportunities outside our cities, allowing developers to generate greater profit by building in suburban areas and contributing to sprawl and its consequences.

The intention of this study is to show developers that there are opportunities to generate profit within our urban areas, even more; there are opportunities to *create value*, the main driver in the real estate in the industry.

Today, there is growing evidence that relates investment in walkable communities with greater economic profit and an increasing demand for units in this type of development. Before analyzing this information we need to understand the basic concepts in real estate development.

As expressed in *Finance for Real Estate Development* (Long 2011), development involves putting large amounts of capital at risk over time. The more capital you invest requires that risk should be reduced by the certainty that the project will succeed and provide the desired returns to investors.

Development is seen as a several stages process, where risk decreases as completion and information of the project increases. Usually, predevelopment phases, which consume just a small percentage of total project costs, have the higher risk of loss. The stages related to this process may vary according to different authors; yet, all of them can be grouped in three major categories: Predevelopment, Development and Close Out (Ibid). To some authors, these categories might include five phases: 1) Project Conception and Land Acquisition, 2) Construction, 3) Completion and Occupancy, 4) Management and 5) Sale (Brueggeman and Fischer 2011). However, the most comprehensive definition on the real estate process is provided by (Mike E. Miles 2007), where development is defined as an eight stage model that goes from the inception of an idea to the property and portfolio management. Figure 2-1 shows the different stages involved and a description of what is expected from the developer on each one of them.

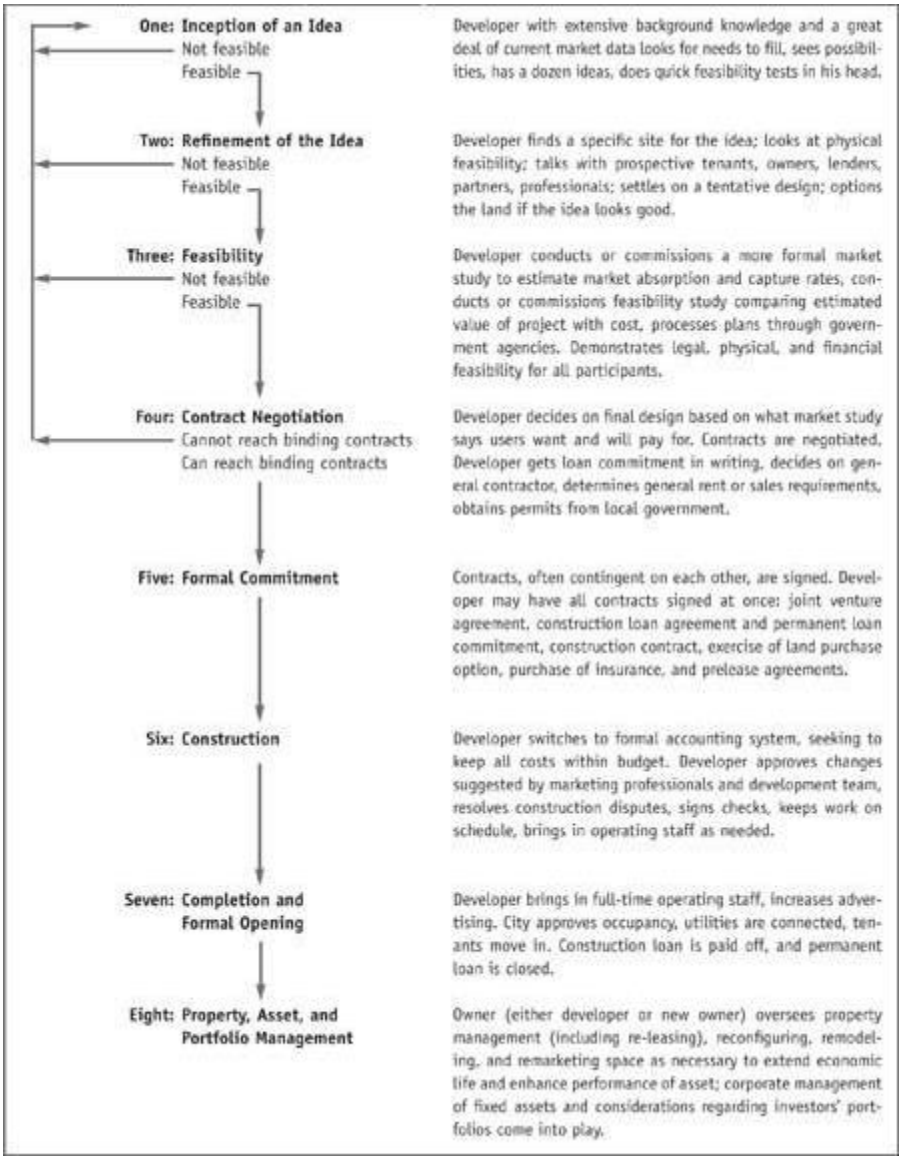

Figure 2-1, the Eight Stage Model (Mike E. Miles 2007)

2.3 The Relation between Real Estate and Capital Markets

As expressed above, the more information we have about a certain project the lower the risks associated with it. This information usually is referred to income streams, vacancy rates, and operational costs associated to a certain real estate asset. All this knowledge is directly obtained from the *Market of Real Estate Assets*, defined as the market in which interests in real property – that is, land and buildings – are traded, and where investors expect a rate of return commensurate with that available from other capital investments of similar risk (Fischer, 2008). However, the real estate assets market gets determined by the relations between two other markets: the *tenant space market* and *the real estate capital market*, where the first is defined as the supply of and tenant's demand for space and the second as the supply of and demand for investment dollars used in the real estate development process (Mike E. Miles 2007).

Space Markets

The space market will determine a property's income stream, which is determined by the specific property's location, features, functions, and benefits to a tenant, where the quality and stability of a property income stream is determined by the strength of the space market and the relative position of a property in that market.

Usually, the strength of space markets is made explicit in all lease contracts through the rental rate, lease term, and rent escalation, among other lease terms (ibid). This whole relation of the project to its specific market is a central piece in real estate development since it will affect the property's value, determined by its capacity to generate, maintain and increase its income stream, commonly referred as Net Operating Income (NOI, Property income stream after discounting the cost of vacancies and operating expenses affecting the project). Expressed as an annual amount, NOI will reflect the property

value when divided by the appropriate capitalization rate (usually a ratio that is the result of the project's growth prospects and perceived risk of its cash flows relative to other investment opportunities), where:

$$\text{Value} = \text{Net Operating Income}/\text{Capitalization Rate}$$

When the perceived risk associated to the project, expressed in units of return, is lower than the one observed in other financial assets, demand for real estate will increase, driving down property capitalization rates and increasing project value. Conversely, if the risk-adjusted return for real estate is inadequate, demand for real estate will decrease; risk associated to the project will be higher, driving project value down because of the higher capitalization rates. Simply because a project has been developed and leased up does not mean that is no longer vulnerable to competition. As space in new developments is supplied to the market, owners of existing projects become subject to the possibility of a loss in tenants (Brueggeman and Fischer 2011). In this regard, city regulation plays an important role in the space market, where market areas with few legal or physical limitations on new space associate a higher risk of new supply (Dallas, Atlanta) shifting demand from one location to another. Alternatively, markets with defined constraints on the land, desirable amenities, high-growth companies, show stronger and stable demand for space (New York, San Francisco) (Mike E. Miles 2007).

Capital Markets

The term capital markets refer to the market for all the various sources of capital for either lending or investment, including government and corporate bonds, corporate stocks, and debt and equity capital for real estate (Jeffrey D. Fischer 2008). Usually, real estate capital markets are categorized in four groups: Private debt, public debt, private equity, and public equity. Real estate funding went from mostly a private funding process, where long term debt was provided by insurance companies, to a public funded process. The distinction between private and public sources of real estate capital is

whether or not the investment capital is publicly traded (Capital is generally raised in public auction markets, usually organized stock and bond markets in New York, with proceeds from issuing these public securities used to fund real estate investments) (Mike E. Miles 2007). The following lines provide a brief description of the different sources of capital that fund real estate development:

1. Private and Public Sources of Real Estate Debt: Today smaller players in real estate funding, private investors were the most significant source of financing in the 80's. As a result of federal deregulation of financial institutions in 1979 and 1980, *savings and loan associations* (S&L's) became commercial real estate lenders on a large scale for the first time. This new source of capital was a key factor on overbuilding the environment, when because of deregulation were able to operate across state borders and became publicly traded. This process ended with an oversupply in the market that crashed in 1987, causing more than $152 billion in private real estate debt to flow out of real estate. This exodus of debt players left a void for new providers to fill, where many of these loans were sold as mortgage pools to Wall Street investors and groups of investors, creating the *public debt market* (Mike E. Miles 2007).

2. Commercial Mortgage-Backed Securities: CMBSs are the most important source of financing today in Real Estate. They correspond to bonds collateralized by pools of commercial property loans. In other words, these bonds are secured by mortgages on income producing properties, where tenants in these properties have signed lease agreements that provide the source of income from which mortgage payments are made. This is important, because if tenants default on lease or if the geographic market in which property is located becomes overbuilt, with a decline in rents, the income stream used to make mortgage payments will become jeopardized (and also will be the pool containing this market). One of the most distinctive elements of CMBSs are the presence of short maturities (5-15 years) on an interest only structure, with the

full amount of principal repaid at maturity (Brueggeman and Fischer 2011). Most common actors in this process are commercial banks, insurance companies, investment bankers, mortgage bankers, and mortgage brokers among others, where they do not supply the funds that flow to the projects for which the loans were originated. They are primarily middlemen, matching sources of long term debt with users of long term debt (Mike E. Miles 2007).

3. Equity Market for Real Estate Capital: As private investors, equity investment has largely followed the path of debt markets, with large amounts of capital departing the real estate market after 1987. This process allowed the public market to step in the form Real Estate Investment Trusts (REITs, to be discussed below); however, in recent years, private equity sources are being offered in the market in the form of *private equity funds* (collective investment scheme, managed by a private equity firm, typically through limited partnerships with a fixed term of 10 years).

4. Real Estate Investment Trusts: As a result of a dearth of private equity capita during the early to mid-1990s, REITs reentered the market and became a viable long term investment vehicle. Although REITs have been a congressionally approved means of publicly holding real estate since the early 1960s, they were underused as an investment vehicle until 1993, when the umbrella partnership REIT (UPREIT) structure was created. The UPREIT structure allows private real estate partnerships to transfer the ownership of their partnership interests to an operating partnership controlled by the UPREIT (Mike E. Miles 2007). Since the transfer is an exchange of one partnership interest for another, it is not a taxable event. In these conditions, the “modern” REIT structure featuring active management and tax deferred exchanges of assets was attractive

to owners and investors alike, resulting in a massive growth in REIT equity market capitalization (Brueggeman and Fischer 2011). As a result of the subprime mortgage crisis in 2007-2008, many REITs were unable to refinance its corporate debt or property level debt when it came due, irrespective of operating performance, resulting in todays' structure, with REITs actively managing their assets in an effort grow their cash flow and their portfolios, which is a fundamentally different entity from their earlier passive role (Ibid).

2.5 The Walkability Premium

The main purpose of this study is to show its audience, planners and real estate developers, that a socially responsible development can be as profitable as suburban development, even considering the higher costs of investing in walkable locations. A concept related to this type of development and that is growing in importance today is *Responsible Property Investment* (RPI). Defined by the United Nations Environment Program (UNEP n.d.), as an approach to property investing that recognizes environmental and social considerations along with more conventional financial objectives. It goes beyond minimum legal requirements, to improving the natural the environmental or social performance of property, through strategies such urban revitalization, or the conservation of natural resources.

In particular, this is a study of walkability and the financial benefits associated with it; however, RPIs address a broader spectrum of issues. Figure 2-2 shows a brief description of them, where Transit Oriented Development and Urban Revitalization are part of the "top ten" strategies to achieve this sustainable goal.

Energy Conservation →	Green power generation and purchasing, energy efficient design, or conservation retrofitting.
Environmental Protection →	Water conservation, solid waste recycling, and habitat protection.
Voluntary Certifications →	Green building certification certified sustainable wood finishes.
Public Transport-Oriented Developments →	Transit-oriented development, walkable communities, mixed-use development.
Urban Revitalization and Adaptability →	Infill development, flexible interiors, brownfield redevelopment.
Health and Safety →	Site security, avoidance of natural hazards, first aic readiness.
Worker Wellbeing →	Plazas, childcare on premises, indoor environment quality, barrier-free design.
Corporate Citizenship →	Regulatory compliance, sustainability disclosure ar Reporting, independent boards, adoption of voluntary codes of ethical conduct, stakeholder engagement.
Social Equity and Community Development →	Fair labor practices, affordable/social housing, community hiring and training.
Local Citizenship →	Quality design, minimum neighborhood impacts, considerate construction, community outreach, historic preservation, no undue influence on local governments.

Figure 2-2, RPI Management Strategies (Pivo, Responsible property investing: what the leaders are doing 2008)

(Pivo, 2008), identifies to types of financially sound RPI strategies; no cost and value added approaches. With the no cost approach, managers find ways to improve the social or environmental performance of their properties at zero added expense. Value added strategies, on the other hand, require some initial financial outlays, but pay for themselves by either increasing net incomes (via higher rents or lower running costs) or reducing risk premiums (via lower environmental risks, less depreciation or less marketability risk). The walkability approach is believed to be a value added one, where more walkable communities will end in, among others, greater demand, higher rents and lower vacancy rates.

Many of the studies cited in this section use *Walk Score* as a tool for research. Walk Score is web-based software that rates the walkability of an address from 1-100 points by determining the distance to educational, retail, food, recreational and entertainment destinations. The more walkable a place, the higher the rating it gets (less than a quarter of a mile using Google Maps). It is important to note the limitations of Walk Score as a tool; however, it is also important to mention that each one of the studies accounted for these limitations adding variables to their models that allowed them to decrease the impact of misleading information obtained from Walk Score. The most common limitations of the software refer to: 1) Walk Score weights all destinations equally, it doesn't differentiate by consumer preferences (which ones are more likely to be walked to); 2) it doesn't account for connectivity, not considering topography or physical barriers in its calculation (both can affect walkability dramatically); 3) Walk Score doesn't measure the intensity of uses, it only looks for the closest establishment of a certain type at a certain distance and finally, 4) when it comes to retail destinations It doesn't differentiate between freestanding retail and enclosed stores, where units inside a commercial center might have a great score without being in a walkable environment. Even so, studies (Carr 2010), (Duncan 2011) have tested the reliability of Walk Score as a tool to estimate access to objectively measured walkable communities, finding a strong correlation between Walk Score and all the amenities found within the one mile buffer.

The following lines will briefly review recent studies that have found a relationship between walkable environments and greater profit for real estate development in this type of setting. Mostly they focus in the premium associated to rent rolls in this type of development, with the consequent premium added to the value of the property.

In their *Walkability Premium* paper, Pivo and Fischer (Pivo , 2011) examined the effects of walkability on the financial performance of real estate investments. They sought to determine whether walkable

properties had market values, incomes, and investment returns that were equal to or better than less walkable forms of development. To achieve this, they used financial performance, physical features and location information of properties over a period of ten years at a national scale for office, retail, apartment and industrial properties (National Council of Real Estate Investment Fiduciaries information, NCREIF) combined with *Walk Score* data for each property to evaluate how walkable the specific locations are when comparing financial metrics of each property. Their results were grouped in three categories: Market value, Net Operating Income and, return on investment.

When it comes to market value, results showed that in every model but industrial, a 1 unit increase in Walk Score produced a 0.9, 0.9 and 0.1 percent value premium for office, retail and apartment properties respectively. As established in the study, all else being equal, an office property with a walk score of 80 was worth 54 percent more per square foot than an office with a 20 Walk Score. Same increase was observed in retail, and a 6 percent more in apartment properties. This lower premium associated to apartment units is explained in the study by both positive proximity and negative dis-amenity effects on residential property values from nearby non-residential uses, with dis-amenity effects increasing as non-residential uses get closer to homes. Here, the Walk Score approach of assigning the highest score to units with most type of non-residential uses within a quarter of a mile, results in properties where the distance between the apartments and non-residential uses is insufficient to fully extinguish negative externalities.

A second category looked at the NOI associated to properties with the higher Walk Score. As we have seen in early in this chapter, property values are a function of the income they produce and the risk associated to that property, with risk represented by the capitalization rate. The study found that per each unit increase in Walk Score, NOI was 0.7 percent higher for office, 0.7 percent higher for retail, and 0.1 percent higher in apartments. No difference was observed for industrial. These results are consistent

with the ones observed in market value, where properties with a score of 80 had a 42 percent higher income per foot than properties with a score of 20. No significant difference was observed for apartment units. It is important to notice that higher incomes alone were insufficient to fully explain the higher values in these properties, since an important part of it is explained by cap rates which affect value independent of NOI. Different income streams might have the same value depending on the capitalization rate used to determine the property value.

The third and final category tested was Return on Investment (ROI). Here, a one point increase in Walk Score increased the appreciation rate by 2 basis points and reduced income returns by 0.7 basis points. As the authors explain, income return is analogous to the cap rate, so in effect investors were willing to accept a 0.007 percent lower cap rate and pay 0.007 percent more per dollar of income for each unit of increase in Walk Score. That gets reflected in a 1.2 faster appreciation per quarter and a 0.42 percent lower cap rate for a property with a score of 80 when compared to one with a score of 20. These lower cap rates help to explain the increase in value that can't be explained solely by NOI. This is an important observation, since the study showed that walkability did not had a great impact on total returns, and where most of the gain is given by the willingness of investors to pay more for each dollar of income produced by more walkable products.

While the previous study is focused on income-producing property values, (Cortright, 2009) looked at the impact of walkability on residential properties. Using information from ZipRealty on over 93,725 housing transactions in 15 housing markets around the United States, and walkability measures provided by Front Seat (Walk Score developer), he performed a hedonic analysis that accounted for several variables that define property value and demand for properties, including neighborhood characteristics, locational attributes, distance to jobs, neighborhood income, functional form, number of bedrooms and bathrooms, square footage, house type and age. Out of the 15 markets studied, 13 of

them showed a high correlation between high housing values and walkability (Las Vegas –Nevada- showed a negative relationship and Bakersfield- California- showed no impact of walkability in prices). The results were coincident for both, denser and faster sunbelt markets. In terms of percentage an average Walk Score of 54 when compared to properties with s score of 71 in the same market, showed an increase of 12%, adding about $34,000 to a property whose weighted average value was $280,000.

A different perspective on the walkability premium is provided by (Rauterkus and Miller 2011). On their study, they centered the analysis on land values (residential vs. commercial) instead of home values. As expressed in the document, the study is focused on land values as opposed to overall home values in order to remove some of the non-location 'noise' in the analysis. They are looking at the degree to which specific location-related elements impact value as opposed to improvements. Improvements may be replicated at any location; however, neighborhood amenities, services and other location-related features may not be easily transported. All these location-based factors are at the central hypothesis of the study, aiming to prove that walkability matters. The study tests for value added to land by neighborhood amenities in Jefferson County Alabama, and then, from a sustainability perspective, if walkability adds value to it. The results showed a strong relationship between land values and the Walk Score of that location, where higher walkability scores were related to higher property values. This relationship proved to be stronger in most walkable neighborhoods, especially those located near de central business district, universities or close to older communities; however, did not explained entirely the phenomenon in car dependent neighborhoods, where values were influenced by the proximity to good schools in the area, factor that was not considered in the analysis. A second relationship established by the study is that property values are highly related to land value, where more walkable environments show higher property values, or, as expressed by the authors, land leverage also increases with walkability.

Finally, some notes on a study performed by (Leinberger and Alfonzo, 2012) over 201 walkable urban places in Metropolitan Washington (D.C.) that met three specific criteria: 1) They were located within jurisdictions that are part of the Metropolitan Washington Council of Governments; 2) they had an existing plan that aimed to increase walkability, density or mixed uses that was not restricted to small area road corridor based plans or is a neighborhood that contains a Metrorail station and; 3) They were not located in Census-designated rural blocks. Using market data from primary and secondary sources, and considering Street Smart Beta version of Walk Score (which accounts for street conectivity) and the Irvine Minnesota Inventory (IMI – audit tool that collects objective data on built environment characteristics hypothesized to be related to physical activity), they performed an hedonic analysis that tested for economic performance and social equity benefits related to walkable places. Results showed that a higher walkability score (approximately a 20 points increase in Walk Score) related to a $8.88 value premium in office rents, a $6.92 premium in retail rents, an 80 percent increase in retail sales, a $301.76 increase in residential rents and $81.54/square foot premium in residential housing values. The study also showed that capitalization rates are lower in places with higher Walk Scores, where retail and office space in walkable areas had a 23 percent premium in value. That difference peaked up to 44.3 percent during the recession period (2008-2010). When it comes to social equity, walkable areas showed lower transportation costs (28 percent less of their average monthly income), better access to transit and jobs (15 percent more jobs), but higher housing costs (17 percent higher). This last issue is highly relevant. Studies (Leinberger, 2007), have shown that today there is pent up demand for walkable neighborhoods, which combined with higher housing costs might outprice current tenants in favor of those with greater income, segregating those who can't pay to neighborhoods with lower rents and, as seen previously, less walkable.

There are policy implications of these findings that relate to initiatives to promote developments using the features of a walkable community. As shown on previous paragraphs, neighborhoods that include a

mixture of retail/commercial and residential properties potentially provide features and benefits that promote the general well-being of the residents. These findings are not only measured from a public benefit perspective related to public health and social equity, they also show that walkability adds value from a financial perspective, which may be attractive to developers and policymakers considering investment in this type of development. From a planning perspective, zoning that encourages the features of walkable communities will certainly result in higher land values. As expressed by (Rauterkus and Miller 2011), Inner city developments in established older neighborhoods with better access to multiple amenities and work are more of a challenge to developers because of the parcel accumulation challenges and the lack of scale but certainly offer the potential for high walkability scores and positive incremental land value. Municipalities seeking higher property tax revenues should encourage such inner city mixed-use development by easing regulatory hurdles or speeding up the permitting process.

CHAPTER 3: Methodology

As mentioned before, this is a study that seeks to evaluate the financial feasibility of patient capital as a source of funding for real estate development in order to create walkable communities. To address this objective, different sources of capital will be used as a patient capital assumption, where instead of a three to five year term, a fifteen year term will be used as the time frame to evaluate the financial performance of the project and to test for the feasibility of the different assumptions over a larger period, where economic performance is mostly measured on rents increase and future project and land value rather than project cash flow. Some of the models used include affordable housing units in order to access tax credits as a source of income. Since the Low Income Housing Tax Credit program (LIHTC) operates over a 15 year period, every source was tested using the same time frame.

3.1 Data Sources

Information from several sources will be used to test the different capital assumptions in the base proforma. First, a project had to be selected. After a broad search of potential units, Welch Plaza, developed by Lorig Development was found to be the more representative example to the purpose of this study. As expressed before, its location in a neighborhood that is under renovation at slow pace using design and land use patterns that address walkability together with the fact that the building itself was the first of several units that intended to remove the blight out of the corner of 23rd and Jackson St, make of Welch Plaza a desirable project to evaluate patient capital assumptions and apply results from a different project, the Alcyone Apartments in South Lake Union (SLU), a development in an area that went through a similar process in a shorter period of time and under an intensive investment model that transformed the South Lake Union neighborhood on a highly desired one and with many of the features of a walkable community in it.

The following are the main data sources used in this research:

1. First, interviews were conducted with both project developers in order to understand the project drivers and the financial metrics behind each project proforma by the time of development. The interviews provided valuable information regarding each project performance over time and the implications of that performance when compared to the original financial assumptions.
2. Information on the Seattle and SLU sub-market was collected to understand market performance as the neighborhood turned walkable, where most of the information relates to vacancy rates and rent changes over time. Together with this information, I had an interview with an Appraiser´s at a local firm who was performing a study on SLU and the Alcyone Apartments in particular. Since this is sensitive information, anonymity of the interviewee was maintained.
3. Private funding data was obtained through informal interviews with regional managers of two nationwide banks. The purpose of the interview was to get feedback on the potential loan benefits that more upfront capital would have in the lending process and loan conditions when compared to the usual financing process.
4. Together with professionals from the private funding sector, two public funding authorities were interviewed in order to understand the availability of financial sources in the public realm that might be used as a patient capital source in private developments. Both of them agreed that no money was available for that purpose, where TOD loans, the only one intended to promote development in a transit oriented setting had a three year payback period under a below market interest rate, however, the three year period does not qualifies as patient capital

within this research parameters. As a suggestion, and one that was also made by the project developers used in this study, Affordable housing was mentioned as the most likely source of patient capital available in the market. To access those funds, the projects require to have at least 20 percent affordable units as part of the development, where funding comes in the form of LIHTC that operates on a fifteen year term. In addition, another Tax Credit policy was included, The New Markets Tax Credits program, which relates to the funding of units that are addressing mix-used development under certain income criteria.

5. Finally, interviews were held with five affordable housing developers in order to understand how the tax credit policies operate and how they are financially modeled in proformas to meet policy requirements and financial feasibility of them when utilized as part of a mixed use-mixed income development strategy.

In addition to the sources included in this chapter, Professors from the Runstad Center for Real Estate at University of Washington were consulted about general market conditions and maturity in the US to address patient capital investments in real estate. All of them agreed on the necessity of a long term strategy to address development in urban settings; however, they also agreed on the extremely "short termed" strategies behind real estate development, many of them promoted by the unstable economic conditions on the US market.

3.2 Theoretical Assumptions behind the Use of Patient Capital in Real Estate

As every model that has to be tested, when thinking of patient capital for real estate, some assumptions have to be made.

First, as expressed by (C. Leinberger 2007), Patient equity is not a substitute for other financing. Rather, it is additive, layered on top of a conventional development budget such that the overall cost of the

project increases. Following Leinberger's model, the usual 80/20 debt/equity rationale, which expects between 20 to 30 percent Internal Rate of Return (IRR), will control ownership of the project and will be responsible for all the construction loan guarantees. Under the patient capital assumption, traditional equity will be treated as mezzanine debt, where ownership and loan guarantees will be on the patient equity investor. On the other hand, the mezzanine equity investor will get all of the after debt cash flow within the accorded period (usually the 3 to 5 year period expected in current developments), however, since there's less risk involved for the investor, he will receive a lower rate of return. Currently, an according to a survey published by Key Bank, mezzanine debt is asking for 14% IRR in the first quarter of 2014, which is a 35% lower than the 15%-16% observed in 2012 (Rizzo 2014). For the purpose of this study, mezzanine financing is treated as equity since that's the way it will appear on a company's balance sheet, creating a potential easier access to standard bank financing.

	Conventional Project			Walkable Urban Project	
Conventional Equity	$200,000	20%		$200,000	16.6%
Debt	$800,000	80%		$800,000	66.7%
Patient Equity	$0	0%		$200,000	16.6%
Total	**$1,000,000**	**100%**		**$1,200,000**	**100%**

Table 3-1, Conventional real estate financing structure vs. patient capital financing structure (C. Leinberger 2007)

The expectations behind this financing structure are that greater equity will provide better financing conditions with lower loan guarantees for the patient capital investor.

In order to test the feasibility of this approach, two basic scenarios and the combination of them will be tested in Welch Plaza's base proforma:

1. The project is developed using LITHC, assuming 20% of total units to be affordable (minimum required by the LITHC program. There are several benefits to this policy, where considering the

affordable housing element not only provides equity in the form of tax credits, but also because of additional benefits that are related to the provision of affordable housing like the Multifamily Tax Exemption Program. The program acts as an incentive for private developers to include affordable units in market rate buildings, promoting inclusionary housing which and addressing the city's long term planning objectives.

2. The project is developed using the New Markets Tax Credits: As a developing area that still falls behind the city's median income, the Central District extended area can be seen as a low income community. The NMTC program is designed to compensate investors for a perceived risk of investing in low income communities, where the main purpose of the program is to bring capital to communities that have traditionally had inadequate access to capital. The NMTC program is a thirty nine percent federal tax credit available to investors over seven periods spanning six years and a day. Federal tax credits equal to five percent of the amount the investor paid to the community development entity for the qualified equity investment.

3. The project will be evaluated under a combination of both scenarios, LIHTC and NMTC, in order to test how feasible it is to address more than one planning outcome at the same time, where the affordable housing contributes with lower operating expenses to the developer, but also with lower rents, since the NMTC program will require a reduction in market retail rents to the project.

CHAPTER 4: Results

As mentioned before, this is an ex-post study that evaluates the impact of patient capital when used to develop real estate in a walkable setting. In order to address this issue the analysis looked at an existing project's proforma and its financial metrics. Then, different policies and assumptions were applied to that proforma to test how they affect those metrics. Basically, the original project is modified on its holding period, sources of funds and potential income (this last one related to thresholds in rents defined by each policy). Following the basic equation in real estate where value equals income divided by capitalization rate, each one the policies (and its assumptions) tested will affect the projects Net Operating Income and Value (Cap Rate stays fixed through all of them since is based on the original project assumptions). Since funding sources also vary from one policy to another, the required financing will also vary, affecting the project metrics and its feasibility.

When compared to Leinberger's approach, these assumptions does not change the project's loan terms, since interviews with lenders proved this to be very unlikely under current economic conditions.

4.1 Welch Plaza Base Proforma

The following model is based on Welch's Plaza proforma by the time of development as informed by Lorig Associates. The project considers a total of 162 units for rent, with 41 of them being affordable as a requirement from the Central Area Development Association (entity who provided an important amount of equity for the project). Later in the process, about a year after delivery, 73 units were converted to condominiums, however, that assumption is not part of this analysis since it was not considered by the time of development and where the reasons to that change were not informed in the interview with Lorig Associates.

The following tables provide information on the project assumptions and feasibility metrics under a 7 year holding period as established in the project's proforma.

Sources of Funds		**% of Cost**
Project Cost	$ 26,685,964.00	100.00%
Loan Amount	**$ 18,874,679.16**	**70.73%**
Equity Required	$ 7,811,284.84	29.27%
Equity	**$ 4,879,480.00**	**18.28%**
2nd Tranche Equity	**$ 2,306,482.00**	**8.64%**
TOTAL FUNDS	**$ 26,060,641.16**	**97.66%**

Table 4-1, Welch Plaza. Summary of Sources.

When looking at the numbers presented above, the first issue that the project presents is a financial gap, where the loan amount is not enough to close the gap between project costs and equity available for the project. The main factors influencing this are NOI and 2004's Cap Rate. Given the existence of funds coming from a non-profit organization that requires affordable rents to be considered in the project, NOI does not reaches the required amount where the loan based on projects performance will cover the financing gap. This problem is also influenced by the cap rate, where 0.5 points can make an important change on project value and therefore in the financial metrics. Project assumptions consider a 7.5% cap rate, considered to be optimistic when looking at 2004's cap rates, where range was observed to be from 7.5% to 8.0%. As a result, there's a negative margin to the project all through the holding period, where only after resale of the project a positive rate of return can be obtained. Original projects Unleveraged IRR was expected to be at 13%, however when using the original assumptions it reaches only 7.7% and with leveraged IRR reaching 14.45%. The following tables show the actual financial metrics and the impact of Cap Rate in those metrics when modified from 7.5% to 7% and with NOI increasing almost 1.8 million by this change.

Feasibility Metrics @ 7.5% Cap Rate	
Profit	$ (1,519,725.12)
Profit Margin	-5.69%
Cash Flow Distribution	
Equity Cash	$ 408,400.71
2nd Tranche Equity Cash	$ 193,046.98
Equity Return	**8.37%**
2nd Tranche Equity Return	**8.37%**
Cash on Cash	**7.07%**
IRR (Levered)	**14.45%**
IRR (Unlevered)	**7.70%**

Table 4-2, Welch Plaza. Summary of Financial Metrics at 7.5% Cap Rate.

Feasibility Metrics @ 7.5% Cap Rate	
Profit	$ 277,863.37
Profit Margin	1.04%
Cash Flow Distribution	
Equity Cash	$ 346,026.02
2nd Tranche Equity Cash	$ 163,563.08
Equity Return	**7.09%**
2nd Tranche Equity Return	**7.09%**
Cash on Cash	**7.07%**
IRR (Levered)	**16.36%**
IRR (Unlevered)	**7.67%**

Table 4-3, Welch Plaza. Summary of Financial Metrics at 7% Cap Rate.

Since affordable rents are already in place, what different financing sources will affect is the amount of equity available to the project and rent assumptions related to retail space, where policies like New Markets Tax Credits will have a negative impact on income.

As mentioned in the previous chapter, three different scenarios (and the combination of them) will be tested in this analysis; mixed income (also mixed use) development considering Low Income Housing Tax Credits, New Market Tax Credits and, Land Owner as a patient capital investor.

4.2 Low Income Housing Tax Credits Proforma

Under this scenario the financing gap is covered and exceeded by using LIHTC as equity into the project. Since affordable rents were already considered on the base proforma, income is not affected by this policy; however, the project is offering more than 20% of its units to low income households, so it qualifies for Seattle´s Multifamiliy Housing Property Tax Exemption Program (MHTEP) which allows the investor to reduce their property taxes by 20% per unit, making a significant reduction in operating expenses and, therefore, an increase in annual income obtained from the project. Also, since NOI has increased, the potential loan available is also higher, however, it has been capped at the maximum needed to cover costs after all equity has been used. This has not an accountable effect on the project, but it does have an effect on the perceived risk associated to the project by potential lenders.

As a requirement of the LIHTC policy, developments have to stay affordable for at least 15 years. For the purpose of this study, and considering that real estate investment usually has a 5-7 years holding period, the 15 years requirement is seen as a Patient Capital source for the project. The downside of this approach comes from the idea that mixed income developments are non-welcome products in the market and having a potential effect on vacancy. This factor has not been considered in the proforma since the project on its origins is already a mixed income unit which considers a 5% vacancy.

Finally, LIHTC equity can be added to the development budget at different stages of development. The usual model will work using a *bridge loan (or a line of credit)* to face predevelopment costs, where the loan will be paid by the time of stabilization (usually 3 months after the Certificate of Occupancy was issued) by drawing down LIHTC equity. Under this scenario, equity will be added to the project by 5% by the time financing closes (acquisition), 10% approximately by 50% of construction and the rest at stabilization. On a different approach, LIHTC equity can be used as upfront capital. Today, developers like Enterprise Community Partners and Mercy Housing are using tax credits equity during construction.

Since this approach increases risk to the investor, it has a direct effect on the pricing per credit the developer can get. Pricing per credit under the bridge loan scenario can get $1.0 or even a $1.05. When using tax credits equity upfront in the process, pricing goes down to $0.95 in order to maintain yield to the investor. At first glance, having a significant reduction in pricing might seem inconvenient for the purpose of development, however, the complexity of additional financing and costs (fees, interest and legal costs) offsets this benefit. For the purpose of this study, pricing has been used at $0.95 per credit in order to increase upfront capital in the project and decrease risk to the lender and following current industry standards.

LIHTC Applicable Fraction	**25.31%**	**Yearly Income Tax Credit**	**$ 231,844.97**
		x Stream of Credit	10.00 Years
Total Development Cost	$ 26,685,964.00	x Inv. Price per Credit	$0.95
Less Land Cost (2.76%)	$ (735,312.00)		
Less Retail Cost	$ (3,048,892.57)	**Equity Investment**	**$ 2,202,527.23**
Eligible Basis	**$ 22,901,759.43**		
x Applicable Fraction	25.31%	**Loan**	**$ 19,603,956.77**
		+ Tax Credit Financing	**$ 2,202,527.23**
Qualified Basis for Credit	**$ 5,796,124.30**	**+ Private Equity**	**$ 4,879,480.00**
x Percentage for New Bldg.	4.00%	**Total Financing**	**$ 26,685,964.00**

Sources of Funds		**% of cost**
Project Cost	$ 26,685,964.00	100.00%
Loan Amount	**$ 19,603,956.77**	**73.46%**
Equity Required	$ 7,082,007.23	26.54%
Patient Equity	**$ 4,879,480.00**	**18.28%**
2nd Tranche Equity	**$ 2,202,527.23**	**8.25%**
TOTAL FUNDS	**$ 26,685,964.00**	**100.00%**

Table 4-4, LIHTC. Summary of Sources.

As seen in the previous table, total equity adds up to a 26.5% of total project cost, where the usual investor will work under an 80/20 model, where equity represents 20% of total development costs (C. Leinberger 2007). As mentioned before, this significant lower loan amount reduces perception of risk

related to the project and, according to Leinberger's approach, it might be enough for a non-recourse loan which significantly reduces risk to the investor.

Feasibility Metrics	
Profit	$ 1,682,258.88
Profit Margin	6.30%
Cash Flow Distribution	
Patient Equity Cash	$ -
2nd Tranche Equity Cash	$ 677,971.87
Patient Equity Return	**0.00%**
2nd Tranche Equity Return	30.78%
Cash on Cash	**7.97%**
IRR (Levered)	**24.11%**
IRR (Unlevered)	**9.96%**

Table 4-5, LIHTC. Summary of Financial Metrics at 7.5% Cap Rate.

As presented on the tables above, LIHTC adds significant equity to the project. Together with this, because of lower operating expenses and higher NOI the project increases cash available to the second tranche investor who takes all after debt cash flow until his desired returns are met. This study does not makes an assumption about desired return to the project; however, the 30.78% obtained in proforma exceeds the range expected for a primary investor in any real estate project (Ibid).

When it comes to profit margin, the higher income and value versus project cost has a direct effect transforming the negative margin in the base proforma into a 6.30%.

Finally, levered IRR climbs up to a 24.11%, with unleveraged IRR at 9.96%, greater than the 7% in the base proforma, but still below the 13% required on Lorig's assumptions.

4.3 New Market Tax Credits Proforma

The most significant impact on proforma when using NMTC alone as patient equity, comes from the reduction on income as a result of lower retail rents. Considering the history and diversity observed in

the Central District, the existence of affordable retail to preserve or attract local entrepreneurs appears as a desirable outcome of the project; however, financial metrics under this scenario does not support this policy alone as an equity source.

NMTC EQUITY	
Retail Development Cost	$ 3,048,892.57
NMTC Equity @ 39%	$ 1,189,068.10
x Inv. Price per Credit	$0.95
Total Equity	$ 1,129,614.70
CDE Fee @ 3% of QEI	($91,466.78)
Annual Monitoring Fees	($213,422.48)
Total NMTC Equity	**$ 824,725.44**

SOURCES AND METRICS NMTC		
Sources of Funds		**% of cost**
Project Cost	$ 26,685,964.00	100.00%
Loan Amount	**$ 18,134,150.36**	**67.95%**
Equity Required	$ 8,551,813.64	32.05%
Patient Equity	**$ 4,879,480.00**	**18.28%**
2nd Tranche Equity	**$ 824,725.44**	**3.09%**
TOTAL FUNDS	**$ 23,838,355.80**	**89.33%**

Table 4-6, NMTC. Summary of Sources.

When looking at the funding sources, current NOI allows a maximum $18.1 million loan, which represents 68% of total project cost. Funding sources add up to a total of 88.3% of total costs, where NMTC equity falls short on filling the financing gap by $2.84 million. This is a scenario that is not feasible as long as the financing gap is not covered, forcing the investor to look for a third investor or source of funding.

Feasibility Metrics	
Profit	$ (2,507,096.85)
Profit Margin	-9.39%
Cash Flow Distribution	
Patient Equity Cash	$ -
2nd Tranche Equity Cash	$ 577,850.50
Patient Equity Return	**0.00%**
2nd Tranche Equity Return	70.07%
Cash on Cash	**6.80%**
IRR (Levered)	**14.18%**
IRR (Levered)	**8.67%**

Table 4-7, NMTC. Summary of Financial Metrics at 7.5% Cap Rate.

The results presented above show that no profit is created by the project, with a negative margin of -9.39%. Levered IRR reaches 14.18% after a 15 years holding period, with unleveraged IRR at 8.66%. Cash on cash returns are even lower than original project, based in the lower cash available as a result of the reduction on income.

As explained before, having affordable retail is a desirable outcome of the project. In order to achieve this goal a third scenario is tested, combining LIHTC and NMTC.

4.4 Low Income Housing and New Market Tax Credits Proforma

The previous scenario had an important gap in financing as a result of the lower equity provided by the NMTC program. To revert this situation a third equity source is required. While several sources are available for this purpose (i.e. TOD Loans, NMTC Loans, City of Seattle Grants), most of them comply with one the requirements of this study, which is the necessity of the capital investor to stay in the project for a longer than usual holding period, where the LIHTC program provided the larger period available in the market for a funding source. The current scenario evaluates the impact of both, NMTC and LIHTC programs as a combined source of funding. This way, the equity provided by the LIHTC program offsets the impact income produced by the lower retail rents required by the NMTC program.

While being less financially attractive than the LIHTC scenario alone given the lower profit and returns it provides, the project addresses more than one objective related to planning issues, where economic profit is created, but also social benefits are related to its development when allowing low income tenants to access affordable retail space, preventing existing or new businesses that meets the income requirements to be out priced from the market because of the appreciation of land and its improvements because of the benefits associated to walkability described in previous chapters that make neighborhoods attractive to the market, rising housing and retail rents.

LIHTC EQUITY	
LIHTC Applicable Fraction	**25.31%**
Total Development Cost	$ 26,685,964.00
Less Land Cost (2.76%)	$ (735,312.00)
Less Retail Cost	$ (3,048,892.57)
Eligible Basis	**$ 22,901,759.43**
x Applicable Fraction	25.31%
Qualified Basis for Credit	**$ 5,796,124.30**
x Percentage for New Bldg.	4.00%
Yearly Income Tax Credit	**$ 231,844.97**
x Stream of Credit	10.00 Years
x Inv. Price per Credit	$0.95
Equity Investment	**$ 2,202,527.23**
Loan	**$ 18,779,231.33**
+ Tax Credit Financing	**$ 2,202,527.23**
+ Private Equity	**$ 4,879,480.00**
Total Financing	**$ 25,861,238.56**

NMTC EQUITY	
Retail Dev. Cost (QEI)	$ 3,048,892.57
NMTC Equity @ 39%	$ 1,189,068.10
x Inv. Price per Credit	$0.95
NMTC Total Equity	$ 1,129,614.70
CDE Fee @ 3% of QEI	$ (91,466.78)
Annual Monitoring Fees	$ (213,422.48)
Total NMTC Equity	**$ 824,725.44**

Sources of Funds		**% of cost**
Project Cost	$ 26,685,964.00	100.00%
Loan Amount	**$ 18,779,231.33**	70.37%
Equity Required	$ 7,906,732.67	29.63%
Patient Equity	**$ 4,879,480.00**	18.28%
2nd Tranche Equity	**$ 3,027,252.67**	11.34%
TOTAL FUNDS	**$ 26,685,964.00**	100.00%

Table 4-8, LIHTC + NMTC. Summary of Sources.

As one can see in the previous table, loan available falls slightly under the one on the LIHTC; however, there is also lower income associated to the project, where the tax abatement on the residential units helps to alleviate the impact of the lower retail rents. As a result of the increase in equity sources available, loan proposed has a lower impact on the total cost, representing 70.37% of total the money needed to fund the project. Again, this low financing requirement when compared to the usual development process represents a project with less perceived risk.

Feasibility Metrics		
Profit	$	694,887.15
Profit Margin		2.60%
Cash Flow Distribution		
Patient Equity Cash	$	-
2nd Tranche Equity Cash	$	654,374.68
Patient Equity Return		**0.00%**
2nd Tranche Equity Return		21.62%
Cash on Cash		**7.70%**
IRR (Levered)		**20.67%**
IRR (Unlevered)		**9.53%**

Table 4-9, LIHTC + NMTC. Summary of Financial Metrics at 7.5% Cap Rate.

Financial metrics prove the project to be feasible; however, profit is way below the one obtained under the LIHTC proforma. Return on cash for the second tranche equity reaches 21.62% which is lower to the obtained for low income housing. When it comes to leveraged IRR reaches 20.67% with unleveraged falling below the 13% required in the base proforma at 9.53%.

4.5 Results Conclusion

When looking at the overall results of each policy, only two of them provided enough equity to close financing gap generated by the lower income that results from considering affordable housing in the project. However, equity and benefits coming from that component what is allowing the project to meet or exceed the required financing structure, where greater equity allowed lower loans, less debt and

even higher income when tax abatement was considered as a tool available because the project was providing more than 20% of its units to low income renters.

When looking at Lorig's requirements for unleveraged IRR, none of the alternatives reached the desired 13%, where the use of the LIHTC and NMTC programs provided unleveraged IRR's slightly below 10%.

CHAPTER 5: Discussion

The previous chapters have looked into the necessity of development in walkable settings as a desired outcome of planning and public health policies. Together with them, research on real estate development suggests that there is value creation when development occurs in these areas suggesting there is an opportunity for developers to invest in these areas despite of the greater costs and complicated permitting process when compared to suburban development.

What this study provides is evidence on how tools, mostly related to finance development in a walkable setting like mixed income-mixed use buildings, can make an existing project, which was not as successful as expected by the time of development, more attractive to investors when because of the use of these tools better financial metrics are obtained.

What this chapter discuss is the findings related to the application of those tools and how they affect decisions in the development process.

5.1 Why Funding Policies are Needed

When looking at Welch's Plaza original proforma, several inconsistencies are found, where project assumptions define a 7.5% capitalization rate but uses a 7.0% for all calculations. This one change in feasibility analysis creates a significant gap in financing that is not addressed by any of the funding sources described in the project. When asked about the gap, no information was obtained from Lorig's associates. The direct consequence of the change in cap rate to the project is that value expected falls below projection affecting potential loans available and, more important, falling below projected costs.

There are ways to overcome this situation, most of them related to an increase on income, which is not considered a valid approach since the project's proforma considers some level of affordability to access

low cost loans available by the time of development. On the other hand, expected rents by the time of development cannot be significantly modified since they respond to the sub-market rents and where any underwriting process will reveal this market inconsistency.

Under this scenario, and given the tools we have today in place to finance mixed income developments, it makes sense to test for project feasibility under different scenarios. It's a well-known fact that development of affordable housing without substantial subsidies are hard to pencil out. However, Welch Plaza is a mixed use-mixed income development that allows for combining different funding sources as long some requirements are met. One factor that favors the project is that when considering the affordable housing component there is no need to adjust projected rents since these units were already part of the base project, which results in no income decrease. On the other hand, the tax abatement established by the city of Seattle for projects that consider more than 20% of its units for affordable housing reduces operating expenses by $240.148, directly increasing NOI to the project and therefore improving project value and loans available. Together with this, the increase in capital coming from the LIHTC program significantly reduces the required loan amount, increasing cash available by a decrease in debt related to the permanent loan. In addition, another desired outcome of the project is met when using LIHTC capital: The project has to remain affordable for at least 15 years. This holding period largely exceeds the usual holding period observed in the market, where developers are exiting the projects somewhere between years 3 and 7 of a certain project, where short term returns are expected and where suburban development offers the best deal for investors (C. Leinberger 2007). This time frame allows development to stay in place and where the exiting strategy proves to be financially feasible. When combining LIHTC and NMTC policies, the project show similar results than when using LIHTC alone, despite of the decrease in retail rents required by the NMTC program. Under both scenarios the project reached leveraged IRR's above 20% (with unleveraged IRR´s slightly below 10%), way above the one found in the original project proforma at 14.45%.

One factor that is not weighted in the project and is a result of the greater equity available for development is the reduction of perceived risk, where the usual investor works under an 80/20 financing model. When looking at the results of using LIHCT alone and LIHTC combined with NMTC equity, the loan required falls below the usual investor assumption, where equity available represents 30% of total development costs. This reduction in financing required is seen by lenders as a sign of a healthy investor, which might allow to negotiate lower cap rates and therefore increase value to the project. At this point, none of the assumptions is considering the escalation in market rents that literature and the Alcyone case provide to this study, where rent escalation in the Alcyone proved to be greater than inflation and therefore adding significant value to the project by increasing rents.

These policies add not only value to the project, they also address desirable planning outcomes like inclusionary housing and affordable retail, creating social value to the neighborhood, retaining existing neighbors and businesses by offering low income housing options and below market retail rents for qualifying businesses.

5.2 Why Upfront Capital Benefits Value Creation

As proposed by (C. Leinberger 2007), upfront capital in the development process is seen as a desirable funding option for a project, since it provides money in the early and more risky phases of development. As mentioned before, this greater upfront capital might allow the developer to negotiate better loan terms, reduce the need for a construction loan guarantee and, as a result, result perceived risk to project by lenders and investors. One downside of this approach is that low cost financing provided by the LIHTC and NMTC programs do not provide short term returns that are attractive to the developer, where the more significant value is created over a long holding period, allowing the neighborhood to achieve the critical mass required to attract more development under similar conditions. It is important to notice that under these conditions there is an increase in rents because of the neighborhood

consolidation; however, this is off-set by the increased land costs resulting from this value creation process. As a general example, Welch's Plaza proforma established land cost at $735.312 by the time of development. That roughly equals $956.192 in 2014 dollars. When looking at the current assessed value of land it reaches $1.901.400 which represents a total of $1.462.176 in 2002 dollars (the time when proforma was developed).

All that being said, developers are reluctant to invest in inclusionary housing. Not every neighborhood will welcome projects like this, where a lot of the so called NIMBYISM (not in my back yard) represents a political deterrent for developing. A recent example to this is Seattle's debate around micro housing, where neighborhoods association have publicly opposed to the creation of units that house low income tenants in dense developments. All this political/market issues represent a factor of risk to this type of development, where vacancy rates can be placed above market expectations and reducing the income producing capacity of the project. In addition, having affordable retail also has a downside to the project related to the restriction imposed in retail rents. As the neighborhood becomes more appreciated, the gap between affordable and market retail rents increases, representing a significant loss on projected income which may balance developing decisions to non-affordable retail space.

5.3 Why More Than One Policy

When looking at the different proformas, only the LIHTC program alone generated enough profit for the project. All other scenarios were unable to fill de gap between costs and value resulting in negative profit to the development. On the other hand, when combining different subsidies, significant increases in funding sources and income resulted in the project. As an example, when looking at the base project proforma, just by adding the tax abatement that it didn't got by the time of development project value increases from $25.16 to $28.36 million, filling the gap between costs and value, resulting a project that generates profit at 6.3% over a 7 year holding period. However, despite of the value increase, loan

required for the project is still above 70%, representing a more expensive source of funding and reducing cash available because of the greater debt service. What feasibility analysis proved was the benefits of packaging different financing tools to meet the desired financial performance of the project, where greater equity increased cash available to the project, lowered perception of risk and opens room for negotiating lower cap rates that will result in greater value. In addition, when packaging financing tools there´s a chance for social equity factors to weight in the project's tenants, where the combination of LIHTC and NMTC programs allowed inclusionary housing together with affordable retail.

5.4 Why Patient Capital Is Not Working To Promote Walkability

Despite the fact that Welch Plaza is a mixed-use unit located in an area designated as an urban village since 2005, the project itself has several features that do not address and have not impacted walkability in the neighborhood, showing that the tools available provide patient capital, but do not foster this type of development.

1. With Jackson being the most walkable street in the area and where most of the retail is located, the project creates a wall all the way through the street, creating a physical barrier between the project and the sidewalk, where retail is only available in the corner of 23rd and Jackson and oriented to tenants that provide services over commercial uses that would attract public to the corner and create a more thriving environment.

2. The project considers a total of 209 parking stalls. That is more than one parking space per apartment unit. As pointed by (Litman 2003), these are the kind of decisions that promote automobile dependent land use patterns, shifting resources from pedestrian oriented infrastructure towards automobile dependent infrastructure. Having more than one parking stall per unit increases project costs since much of the available

parking is located below grade, a design feature that involves an important amount of capital that could have been used in project features that promote walkability. Just as an example, most of the wall that creates the barrier between the building and the sidewalk that runs along both avenues corresponds to the parking located below grade on both sides of the building. By the time of development, much of the infrastructure was already in place. Sidewalks preexisted the project and transit was covering the area. Shifting resources from this auto dependent development type to a pedestrian one would have allowed investing in appropriate streetscaping, and a more walkable friendly infrastructure or, the project could have included a larger square footage of retail in direct relation to Jackson Street, improving its pedestrian character.

3. One of the main reasons why the project was feasible was the lower cost of land, owned by the city, and sold to the developer at a very low cost in order to remove the blighted corner of 23rd and Jackson. In exchange, the city got a percentage of affordable housing at 80% AMI in a mixed-income unit in a central area of the city, close to downtown and addressing some level of inclusive housing (one might argue if, given Seattle's median income compared to the US median income, 80% AMI is actually affordable housing). However, the city failed to negotiate for a higher level of walkable features in the project. Sidewalks kept the same size they use to have before the project came in. Streets basically didn't change any features besides some lightning at the pedestrian level.

4. Finally, the project reveals the lack of policies and regulation that might promote walkability, where most of the public money available for development doesn't have specific requirements on this regard and is heavily focused on the provision housing

over any other outcome and where how much walkable a development is, depends exclusively on the developers will to address these improvements. Current Zoning for the area is ***NC3-65***, area that is expected to be a larger pedestrian center according to the code, with no minimum requirements for parking, however, there is also no cap for this feature, where developers can provide as many units as they want as long it is feasible for the project. In an intersection that has been identified as the district business center, no areas have been zoned as ***P*** (*pedestrian designated zones),* where surface parking is not allowed adjacent to principal pedestrian streets (DPD 2012) and where uses and facades have to be essentially pedestrian oriented. When it comes to policies that address walkability, the previous example shows how the expression of those policies - the zoning code – leaves a gap for development that still allows non-pedestrian land uses and contradicting the vision set in the comprehensive plan for urban villages.

5.5 What to Expect

With our cities constantly growing, were affordable housing is usually being developed over cheaper land to reduce development costs, but resulting in urban expansion and gentrification, local governments should promote investment in more diverse walkable communities. Rising rents in well consolidated urban areas have displaced low income tenants out of these areas and where inclusionary housing might help to alleviate the problem. This study represents a small step in that direction by showing that value is created when investing in walkable communities and including affordable housing in it. Where over the long term, the combination of both result in greater value to the project and hopefully, to the community. On this regard, future research should consider a broader analysis on the economic performance of inclusionary housing projects compared to market rate only projects, where

information regarding effective vacancy rates and operating expenses, together with cap rates involved in potential sales can help to better understand the performance of this products in the market and eventually attract more investment from different capital assets to real estate development in walkable settings.

CHAPTER 6: Conclusion

The purpose of this study was to present an ex-post analysis of an existing project proforma that compares the project's assumptions by the time of development to the same project when different financing tools were applied. Most of the financing tools used in the analysis represented up front capital for the development process, but also affected, in a negative or positive way, the income producing capacity of the project. That approach allowed to evaluate the financial performance of the project under the different tools, or the combination of them, in order to understand how feasible it would be to promote real estate development in walkable settings and considering desirable planning outcomes to the project.

Among the most important findings of this study we have:

The importance of upfront capital in the development process. As seen in project´s proforma, when more up front capital is available in the early stages of the process, less money is required from lending institutions, having a direct impact on cash available to the project because of lower debt. In addition, and as several authors and lending professionals agreed, the existence of upfront capital diminishes risk associated to the project allowing for better loan terms that reduces the overall cost of development.

The importance of packaging tools to achieve desired project outcomes. There are synergies created by applying several financial tools to a development. While some of them have negative impacts on the income stream, the increase in capital they generate in the early stages of the process results in greater returns over the long run. Together with this, packaging tools allow for planning solutions that are not feasible when they work alone as equity sources, and when bundled with other tools they add sufficient value to the project in order to be considered as a valid alternative of development.

The importance of public-private partnerships. Public agencies and private entities usually walk on different sides of the road, where public policy is seen as a deterrent for economic development by private entities. The results presented in this study provide a general overview on how partnerships between both, public and private, can create social and economic value without blocking their individual goals. Creative ways to address different interests have to be used; however, further research is required to demonstrate over a broader basis that this social and economic gains can go together over a long term planning process.

The Importance of having tools specifically designed to address walkability. As seen in the discussion, patient capital is available for real estate development; however, the setting of that development is not defined and could be used for several types of development, not specifically those intended to be walkable. What Patient Capital is providing, is funds over a larger period of time that will allow a certain neighborhood to become walkable, where literature suggests that walkability will impact value, not cost, since these will shift from non-walkable features (i.e. larger parking) to walkable improvements. In order for this to occur, funding policies should be highly related to the provision of walkable features in potential developments together with the other outcomes presented in this study (affordable housing and retail).

Conclusion:

As scientific evidence on the importance of walkable communities keeps growing from the planning, public health and real estate areas, effective financial tools have to be developed or improved in order to achieve this goal. There are tools available that allow to overcome the financial gap between the higher costs of development in walkable communities and address desirable planning outcomes; however they all follow a complicated application procedure that together with a complicated permitting process might discourage development in these areas.

While developers have to become aware of the importance of these planning outcomes for future benefit, local governments should also create better ways to facilitate development in these areas through more financial incentives tied to planning outcomes related to walkability and looking for the creation of synergies between the different market forces in place.

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APPENDIX: DIFFERENT SCENARIOS PROFORMAS

Assumptions (Project and Market Data)		
Rents/Sales		
Market Units	39,509.93	sf
Affordable Units	33,748.06	sf
Condo Units	60,088.01	sf
Retail	17,200.00	sf
Parking Units	209	
Market Rents	$ 1.56	sf/month
Affordable Rents	$ 0.89	sf/month
Retail Rents	$ 11.33	sf/year
Parking	$ 1,140.00	stall/year
Op. Expenses and Vacancy		
Housing Expenses	$ 3,826.00	unit/year
Retail Expenses	$ 1.00	sf/year
Parking Expenses	0%	included in apt. exp
Housing Vacancy	5%	
Retail Vacancy	5%	
Parking Vacancy	5%	
Tax Savings	$ 1,482.40	unit/year
Financing Data		
Land	$ 735,312.00	
Patient Equity	$ 4,879,480.00	
2nd Tranche Equity	$ 2,306,482.00	
Replacement Reserve	0%	
T.O. Loan Rate	5.50%	
T.O. Loan Period	30.00	
T.O. Loan DSCR	1.25	
T.O. Loan To Value	75%	
T.O. Loan Available Fee	1%	
Interim Loan L/C	85%	
Interim Loan Fee	1%	
Interim Loan Interest	5.50%	
Interim Loan Reserve	2.40%	
Capitalization Rate	7.50%	

Construction Data (H)		
Hard Costs (WG Clark Final Bid)	$ 15,747,215.00	
Hazardous Materials Abatement	$ 10,000.00	
Retail Tenant Improvements	$ 509,880.00	
Furniture, Fixtures & Equipment	$ 100,000.00	
Construction Data (S)		
Pre-Development Feasibility Analysis	$ 31,048	
Design Costs (Engineer, Architect, Etc)	$ 1,438,784	
Exterior Envelope Consultant	$ 50,000	
Reimburseables	$ 164,000	
Signage & Fence Rental & Art	$ 76,500	
Construction Testing	$ 115,000	
Survey	$ 11,000	
Environmental Level 1	$ 16,993	
Traffic Study	$ 14,932	
Water Meter & Installation	$ 65,000	
Utility Hook-Ups	$ 61,000	
SCL Rebate	$ (125,000)	
Project Management	$ 1,465,000	5.81%
CADA Fee	$ 350,000	
MUP & Building Permit	$ 254,500	
Builder's Risk + Liability Insurance	$ 126,414	
Legal Fees	$ 261,575	
Appraisal	$ 45,280	
Sales Tax @ 8,8%	$ 1,512,319.00	8.80%
Construction Contingency @	$ 824,000.00	5.03%
Total	$ 6,758,345.00	
Loan Financing Costs		
Total	$ 2,825,212	

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL

INCOME PROFORMA	
Annual Gross Income	
Market Housing	$ 739,855.05
Affordable Housing	$ 359,160.00
Condominium Units	$ 1,125,196.23
Retail	$ 194,876.00
Monthly Parking	$ 238,260.00
TGI	**$ 2,657,347.28**
Vacancy	
Market Housing	$ 36,992.75
Affordable Housing	$ 17,958.00
Condominium Units	$ 56,259.81
Retail	$ 9,743.80
Monthly Parking	$ 11,913.00
Total Vacancy	**$ 132,867.36**
AGI	**$ 2,524,479.92**
Operating Expenses	
Market Housing	$ 183,648.00
Affordable Housing	$ 156,866.00
Condominium Units	$ 279,298.00
Less Tax Savings	
Retail	$ 17,200.00
Monthly Parking (included in residential)	$ -
TOE	**$ 637,012.00**
NOI	**$ 1,887,467.92**
CAPITALIZED VALUE	**$ 25,166,238.88**
Take Out Loan	
Annual Debt Service Allowed (DSC)	$ 1,509,974.33
Mortgage Constant	0.0057
DSCR Loan Amount	$ 22,161,611.81
LTV Loan	$ 18,874,679.16
Take Out Loan Amount	**$ 18,874,679.16**
Debt Service	$ 1,286,020.23
Interim Loan Allowed (LTC)	**$ 22,683,069.40**
Loan Considering Equity	**$ 19,500,002.00**
INTERIM LOAN AMOUNT	**$ 18,874,679.16**
CASH FLOW	**$ 601,447.69**

COST PROFORMA	
Hard Construction Costs	
Construction Cost	$ 15,747,215.00
Hazardous Materials Abatement	$ 10,000.00
Retail Tenant Improvements	$ 509,880.00
Furniture, Fixtures and Equipment	$ 100,000.00
Other	$ -
THC	**$ 16,367,095.00**
Soft Construction Costs	
Pre-Development Feasibility Analysis	$ 31,048.00
Design Costs (Engineer, Architect, Etc)	$ 1,438,784.00
Exterior Envelope Consultant	$ 50,000.00
Reimburseables	$ 164,000.00
Signage & Fence Rental & Art & Survey	$ 87,500.00
Construction Testing	$ 115,000.00
Environmental Level 1 + Traffic Study	$ 31,925.00
Water Meter & Installation, Utility Hookups	$ 126,000.00
SCL Rebate	$ (125,000.00)
Project Management	$ 1,465,000.00
CADA Fee + Legal Fees	$ 611,575.00
MUP & Building Permit	$ 254,500.00
Builder's Risk + Liability Insurance	$ 126,414.00
Appraisal	$ 45,280.00
Sales Tax @ 8,8%	$ 1,512,319.00
Construction Contingency @	$ 824,000.00
TSC	**$ 6,758,345.00**
Financing and Contingency	
Bank Costs - Counsel, Escrow Title	$ 76,000.00
Interim Loan Fee	$ 195,000.00
Interest During Construction	$ 1,681,171.00
Interest Reserve (in months)	$ 430,939.00
Oan Subsidy and P&Y Payment	$ 50,206.00
Income Offset	$ (160,639.00)
Bank Inspection	$ 30,000.00
Real Estate Taxes (incl. abatement fee)	$ 67,580.00
Space Planning	$ 46,500.00
Lease Comissions & Opening	$ 50,000.00
LeaseUp/Marketing/StartUp/Allowances	$ 100,000.00
Soft Cost Contingency	$ 174,005.00
Equity Raising & PR	$ 84,450.00
TFC	**$ 2,825,212.00**
TOTAL CONSTRUCTION COST	**$ 25,950,652.00**
Land Value	
Land	$ 735,312.00
TOTAL PROJECT COST + LAND	**$ 26,685,964.00**

SOURCES AND METRICS BASE PROFORMA	
Sources of Funds	
Project Cost	$ 26,685,964.00
Loan Amount	**$ 18,874,679.16**
Equity Required	$ 7,811,284.84
Equity	**$ 4,879,480.00**
2nd Tranche Equity	**$ 2,306,482.00**
TOTAL FUNDS	**$ 26,060,641.16**
Feasibility Metrics @ 7.5% Cap Rate	
Profit	$ (1,519,725.12)
Profit Margin	-5.69%
Cash Flow Distribution	
Equity Cash	$ 408,400.71
2nd Tranche Equity Cash	$ 193,046.98
Equity Return	**8.37%**
2nd Tranche Equity Return	**8.37%**
Cash on Cash	**7.07%**
IRR (Levered)	**14.45%**
IRR (Unlevered)	**7.70%**

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL							
	2004	2005	2006	2007	2008	2009	2010
Gross Income (growth)							
Market Housing	$ 739,855.05	$ 758,351.43	$ 777,310.22	$ 796,742.97	$ 816,661.54	$ 837,078.08	$ 858,005.04
Affordable Housing	$ 359,160.00	$ 368,139.00	$ 377,342.47	$ 386,776.04	$ 396,445.44	$ 406,356.57	$ 416,515.49
Condominium Units	$ 1,125,196.23	$ 1,153,326.13	$ 1,182,159.29	$ 1,211,713.27	$ 1,242,006.10	$ 1,273,056.25	$ 1,304,882.66
Retail	$ 194,876.00	$ 199,747.90	$ 204,741.60	$ 209,860.14	$ 215,106.64	$ 220,484.31	$ 225,996.41
Monthly Parking	$ 238,260.00	$ 244,216.50	$ 250,321.91	$ 256,579.96	$ 262,994.46	$ 269,569.32	$ 276,308.55
Total Income	**$ 2,657,347.28**	**$ 2,723,780.96**	**$ 2,791,875.49**	**$ 2,861,672.37**	**$ 2,933,214.18**	**$ 3,006,544.54**	**$ 3,081,708.15**
Vacancy/Credit Loss							
Market Housing	$ (466,108.68)	$ (37,917.57)	$ (38,865.51)	$ (39,837.15)	$ (40,833.08)	$ (41,853.90)	$ (42,900.25)
Affordable Housing	$ (226,270.80)	$ (18,406.95)	$ (18,867.12)	$ (19,338.80)	$ (19,822.27)	$ (20,317.83)	$ (20,825.77)
Condominium Units	$ (708,873.62)	$ (57,666.31)	$ (59,107.96)	$ (60,585.66)	$ (62,100.30)	$ (63,652.81)	$ (65,244.13)
Retail	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Monthly Parking	$ (150,103.80)	$ (12,210.83)	$ (12,516.10)	$ (12,829.00)	$ (13,149.72)	$ (13,478.47)	$ (13,815.43)
Adjusted Gross Income	**$ 1,105,990.37**	**$ 2,597,579.31**	**$ 2,662,518.79**	**$ 2,729,081.76**	**$ 2,797,308.81**	**$ 2,867,241.53**	**$ 2,938,922.56**
Operating Expenses (growth)							
Market Housing	$ (183,648.00)	$ (188,239.20)	$ (192,945.18)	$ (197,768.81)	$ (202,713.03)	$ (207,780.86)	$ (212,975.38)
Affordable Housing	$ (156,866.00)	$ (160,787.65)	$ (164,807.34)	$ (168,927.52)	$ (173,150.71)	$ (177,479.48)	$ (181,916.47)
Condominium Units	$ (279,298.00)	$ (286,280.45)	$ (293,437.46)	$ (300,773.40)	$ (308,292.73)	$ (316,000.05)	$ (323,900.05)
Less Tax Savings	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retail	$ (17,200.00)	$ (17,630.00)	$ (18,070.75)	$ (18,522.52)	$ (18,985.58)	$ (19,460.22)	$ (19,946.73)
Monthly Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenses	**$ (637,012.00)**	**$ (652,937.30)**	**$ (669,260.73)**	**$ (685,992.25)**	**$ (703,142.06)**	**$ (720,720.61)**	**$ (738,738.62)**
Net Operating Income (time adjusted)	**$ 390,815.31**	**$ 1,944,642.01**	**$ 1,993,258.06**	**$ 2,043,089.51**	**$ 2,094,166.75**	**$ 2,146,520.92**	**$ 2,200,183.94**
Debt Service (time adjusted)	$ (1,286,020.23)	$ (1,286,020.23)	$ (1,286,020.23)	$ (1,286,020.23)	$ (1,286,020.23)	$ (1,286,020.23)	$ (1,286,020.23)
Before Tax Cash Flow	$ (895,204.92)	$ 658,621.78	$ 707,237.83	$ 757,069.28	$ 808,146.52	$ 860,500.69	$ 914,163.71
Principal	$ 254,258.81	$ 268,601.01	$ 283,752.22	$ 299,758.07	$ 316,666.79	$ 334,529.28	$ 353,399.36
Less Depreciation	$ (597,172.06)	$ (716,606.47)	$ (716,606.47)	$ (716,606.47)	$ (716,606.47)	$ (716,606.47)	$ (716,606.47)
Taxable Income	$ (1,238,118.16)	$ 210,616.32	$ 274,383.58	$ 340,220.88	$ 408,206.83	$ 478,423.50	$ 550,956.60
Tax Benefit	$ 619,059.08						
Tax Investment Credit	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cash Flow	$ (895,204.92)	$ 658,621.78	$ 707,237.83	$ 757,069.28	$ 808,146.52	$ 860,500.69	$ 914,163.71
After Tax Cash Flow	$ (276,145.83)	$ 658,621.78	$ 707,237.83	$ 757,069.28	$ 808,146.52	$ 860,500.69	$ 914,163.71
Changes in Capital	$ (5,150,343.20)	$ -	$ -	$ -	$ -	$ -	$ -
Total Benefit	$ (5,426,489.04)	$ 658,621.78	$ 707,237.83	$ 757,069.28	$ 808,146.52	$ 860,500.69	$ 914,163.71
Cumulative Benefit	$ (5,426,489.04)	$ (4,767,867.26)	$ (4,060,629.43)	$ (3,303,560.14)	$ (2,495,413.62)	$ (1,634,912.93)	$ (720,749.22)

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL

INCOME PROFORMA	
Annual Gross Income	
Market Housing	$ 739,855.05
Affordable Housing	$ 359,160.00
Condominium Units	$ 1,125,196.23
Retail	$ 194,876.00
Monthly Parking	$ 238,260.00
TGI	**$ 2,657,347.28**
Vacancy	
Market Housing	$ 36,992.75
Affordable Housing	$ 17,958.00
Condominium Units	$ 56,259.81
Retail	$ 9,743.80
Monthly Parking	$ 11,913.00
Total Vacancy	**$ 132,867.36**
AGI	**$ 2,524,479.92**
Operating Expenses	
Market Housing	$ 183,648.00
Affordable Housing	$ 156,866.00
Condominium Units	$ 279,298.00
Less Tax Savings	$ (240,148.80)
Retail	$ 17,200.00
Monthly Parking (included in residential)	$ -
TOE	**$ 396,863.20**
NOI	**$ 2,127,616.72**
CAPITALIZED VALUE	**$ 28,368,222.88**
Take Out Loan	
Annual Debt Service Allowed (DSC)	$ 1,702,093.37
Mortgage Constant	0.0057
DSCR Loan Amount	$ 24,981,307.15
LTV Loan	$ 21,276,167.16
Take Out Loan Amount	**$ 21,276,167.16**
Debt Service	$ 1,449,644.84
Interim Loan Allowed (LTC)	**$ 22,683,069.40**
Loan Considering Equity	**$ 19,603,956.77**
INTERIM LOAN AMOUNT	**$ 19,603,956.77**
CASH FLOW	**$ 677,971.87**

COST PROFORMA	
Hard Construction Costs	
Construction Cost	$ 15,747,215.00
Hazardous Materials Abatement	$ 10,000.00
Retail Tenant Improvements	$ 509,880.00
Furniture, Fixtures and Equipment	$ 100,000.00
Other	$ -
THC	**$ 16,367,095.00**
Soft Construction Costs	
Pre-Development Feasibility Analysis	$ 31,048.00
Design Costs (Engineer, Architect, Etc)	$ 1,438,784.00
Exterior Envelope Consultant	$ 50,000.00
Reimburseables	$ 164,000.00
Signage & Fence Rental & Art & Survey	$ 87,500.00
Construction Testing	$ 115,000.00
Environmental Level 1 + Traffic Study	$ 31,925.00
Water Meter & Installation, Utility Hookups	$ 126,000.00
SCL Rebate	$ (125,000.00)
Project Management	$ 1,465,000.00
CADA Fee + Legal Fees	$ 611,575.00
MUP & Building Permit	$ 254,500.00
Builder's Risk + Liability Insurance	$ 126,414.00
Appraisal	$ 45,280.00
Sales Tax @ 8,8%	$ 1,512,319.00
Construction Contingency @	$ 824,000.00
TSC	**$ 6,758,345.00**
Financing and Contingency	
Bank Costs - Counsel, Escrow Title	$ 76,000.00
Interim Loan Fee	$ 195,000.00
Interest During Construction	$ 1,681,171.00
Interest Reserve (in months)	$ 430,939.00
Oan Subsidy and P&Y Payment	$ 50,206.00
Income Offset	$ (160,639.00)
Bank Inspection	$ 30,000.00
Real Estate Taxes (incl. abatement fee)	$ 67,580.00
Space Planning	$ 46,500.00
Lease Comissions & Opening	$ 50,000.00
LeaseUp/Marketing/StartUp/Allowances	$ 100,000.00
Soft Cost Contingency	$ 174,005.00
Equity Raising & PR	$ 84,450.00
TFC	**$ 2,825,212.00**
TOTAL CONSTRUCTION COST	**$ 25,950,652.00**
Land Value	
Land	$ 735,312.00
TOTAL PROJECT COST + LAND	**$ 26,685,964.00**

SOURCES AND METRICS LIHTC	
Sources of Funds	
Project Cost	$ 26,685,964.00
Loan Amount	**$ 19,603,956.77**
Equity Required	$ 7,082,007.23
Patient Equity	**$ 4,879,480.00**
2nd Tranche Equity	**$ 2,202,527.23**
TOTAL FUNDS	**$ 26,685,964.00**
Feasibility Metrics	
Profit	$ 1,682,258.88
Profit Margin	6.30%
Cash Flow Distribution	
Patient Equity Cash	$ -
2nd Tranche Equity Cash	$ 677,971.87
Patient Equity Return	**0.00%**
2nd Tranche Equity Return	30.78%
Cash on Cash	**7.97%**
IRR (Levered)	**24.11%**
IRR (Unlevered)	**9.96%**

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL

	2004	2005	2006	2007	2008	2009	2010	2018		2019
Gross Income (growth)										
Market Housing	$ 739,855.05	$ 758,351.43	$ 777,310.22	$ 796,742.97	$ 816,661.54	$ 837,078.08	$ 858,005.04	$ 1,045,395.82		$ 1,071,530.72
Affordable Housing	$ 359,160.00	$ 368,139.00	$ 377,342.47	$ 386,776.04	$ 396,445.44	$ 406,356.57	$ 416,515.49	$ 507,483.68		$ 520,170.77
Condominium Units	$ 1,125,196.23	$ 1,153,326.13	$ 1,182,159.29	$ 1,211,713.27	$ 1,242,006.10	$ 1,273,056.25	$ 1,304,882.66	$ 1,589,872.81		$ 1,629,619.63
Retail	$ 194,876.00	$ 199,747.90	$ 204,741.60	$ 209,860.14	$ 215,106.64	$ 220,484.31	$ 225,996.41	$ 275,354.69		$ 282,238.55
Monthly Parking	$ 238,260.00	$ 244,216.50	$ 250,321.91	$ 256,579.96	$ 262,994.46	$ 269,569.32	$ 276,308.55	$ 336,655.14		$ 345,071.52
Total Income	**$ 2,657,347.28**	**$ 2,723,780.96**	**$ 2,791,875.49**	**$ 2,861,672.37**	**$ 2,933,214.18**	**$ 3,006,544.54**	**$ 3,081,708.15**	**$ 3,754,762.14**		**$ 3,848,631.19**
Vacancy/Credit Loss										
Market Housing	$ (466,108.68)	$ (37,917.57)	$ (38,865.51)	$ (39,837.15)	$ (40,833.08)	$ (41,853.90)	$ (42,900.25)	$ (52,269.79)		$ (53,576.54)
Affordable Housing	$ (226,270.80)	$ (18,406.95)	$ (18,867.12)	$ (19,338.80)	$ (19,822.27)	$ (20,317.83)	$ (20,825.77)	$ (25,374.18)		$ (26,008.54)
Condominium Units	$ (708,873.62)	$ (57,666.31)	$ (59,107.96)	$ (60,585.66)	$ (62,100.30)	$ (63,652.81)	$ (65,244.13)	$ (79,493.64)		$ (81,480.98)
Retail	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Monthly Parking	$ (150,103.80)	$ (12,210.83)	$ (12,516.10)	$ (12,829.00)	$ (13,149.72)	$ (13,478.47)	$ (13,815.43)	$ (16,832.76)		$ (17,253.58)
Adjusted Gross Income	**$ 1,105,990.37**	**$ 2,597,579.31**	**$ 2,662,518.79**	**$ 2,729,081.76**	**$ 2,797,308.81**	**$ 2,867,241.53**	**$ 2,938,922.56**	**$ 3,580,791.77**		**$ 3,670,311.56**
Operating Expenses (growth)										
Market Housing	$ (183,648.00)	$ (188,239.20)	$ (192,945.18)	$ (197,768.81)	$ (202,713.03)	$ (207,780.86)	$ (212,975.38)	$ (259,489.82)		$ (265,977.06)
Affordable Housing	$ (156,866.00)	$ (160,787.65)	$ (164,807.34)	$ (168,927.52)	$ (173,150.71)	$ (177,479.48)	$ (181,916.47)	$ (221,647.55)		$ (227,188.74)
Condominium Units	$ (279,298.00)	$ (286,280.45)	$ (293,437.46)	$ (300,773.40)	$ (308,292.73)	$ (316,000.05)	$ (323,900.05)	$ (394,640.76)		$ (404,506.78)
Less Tax Savings	$ 240,148.80	$ 246,152.52	$ 252,306.33	$ 258,613.99	$ 265,079.34	$ 271,706.32	$ 278,498.98	$ -		$ -
Retail	$ (17,200.00)	$ (17,630.00)	$ (18,070.75)	$ (18,522.52)	$ (18,985.58)	$ (19,460.22)	$ (19,946.73)	$ (24,303.15)		$ (24,910.73)
Monthly Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Total Expenses	**$ (396,863.20)**	**$ (406,784.78)**	**$ (416,954.40)**	**$ (427,378.26)**	**$ (438,062.72)**	**$ (449,014.28)**	**$ (460,239.64)**	**$ (900,081.28)**		**$ (922,583.31)**
Net Operating Income (time adjusted)	**$ 590,939.31**	**$ 2,190,794.53**	**$ 2,245,564.39**	**$ 2,301,703.50**	**$ 2,359,246.09**	**$ 2,418,227.24**	**$ 2,478,682.92**	**$ 2,680,710.49**		**$ 2,747,728.25**
Debt Service (time adjusted)	$ (1,449,644.84)	$ (1,449,644.84)	$ (1,449,644.84)	$ (1,449,644.84)	$ (1,449,644.84)	$ (1,449,644.84)	$ (1,449,644.84)	$ (1,449,644.84)		$ (1,449,644.84)
Before Tax Cash Flow	$ (858,705.53)	$ 741,149.68	$ 795,919.55	$ 852,058.66	$ 909,601.24	$ 968,582.40	$ 1,029,038.08	$ 1,231,065.64		$ 1,298,083.41
Principal	$ 286,609.01	$ 302,776.01	$ 319,854.95	$ 337,897.29	$ 356,957.35	$ 377,092.55	$ 398,363.53	$ 617,920.45		$ 652,776.02
Less Depreciation	$ (599,427.70)	$ (719,313.24)	$ (719,313.24)	$ (719,313.24)	$ (719,313.24)	$ (719,313.24)	$ (719,313.24)	$ (719,313.24)		$ (719,313.24)
Taxable Income (or Loss)	$ (1,171,524.23)	$ 324,612.45	$ 396,461.26	$ 470,642.70	$ 547,245.35	$ 626,361.70	$ 708,088.37	$ 1,129,672.85	$ 19,779,748.59	$ 1,231,546.18
Tax Benefit	$ 585,762.12								$ (2,966,962.29)	
Tax Investment Credit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ 1.00
Cash Flow	$ (858,705.53)	$ 741,149.68	$ 795,919.55	$ 852,058.66	$ 909,601.24	$ 968,582.40	$ 1,029,038.08	$ 1,231,065.64		$ 1,298,083.41
After Tax Cash Flow	**$ (272,943.42)**	**$ 741,149.68**	**$ 795,919.55**	**$ 852,058.66**	**$ 909,601.24**	**$ 968,582.40**	**$ 1,029,038.08**	**$ 1,231,065.64**	**$ (2,966,962.29)**	**$ 1,298,084.41**
Changes in Capital	**$ (2,836,825.28)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 18,371,641.79**	**$ -**
Total Benefit	**$ (3,109,768.70)**	**$ 741,149.68**	**$ 795,919.55**	**$ 852,058.66**	**$ 909,601.24**	**$ 968,582.40**	**$ 1,029,038.08**	**$ 1,231,065.64**	**$ 15,404,679.50**	**$ 1,298,084.41**
Cumulative Benefit	**$ (3,109,768.70)**	**$ (2,368,619.02)**	**$ (1,572,699.47)**	**$ (720,640.81)**	**$ 188,960.43**	**$ 1,157,542.83**	**$ 2,186,580.91**	**$ 11,791,489.80**	**$ 27,196,169.30**	**$ 13,089,574.20**

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL

INCOME PROFORMA	
Annual Gross Income	
Market Housing	$ 739,855.05
Affordable Housing	$ 359,160.00
Condominium Units	$ 1,125,196.23
Retail	$ 116,925.60
Monthly Parking	$ 238,260.00
TGI	**$ 2,579,396.88**
Vacancy	
Market Housing	$ 36,992.75
Affordable Housing	$ 17,958.00
Condominium Units	$ 56,259.81
Retail	$ 5,846.28
Monthly Parking	$ 11,913.00
Total Vacancy	**$ 128,969.84**
AGI	**$ 2,450,427.04**
Operating Expenses	
Market Housing	$ 183,648.00
Affordable Housing	$ 156,866.00
Condominium Units	$ 279,298.00
Less Tax Savings	$ -
Retail	$ 17,200.00
Monthly Parking (included in residential)	$ -
TOE	**$ 637,012.00**
NOI	**$ 1,813,415.04**
CAPITALIZED VALUE	**$ 24,178,867.15**
Take Out Loan	
Annual Debt Service Allowed (DSC)	$ 1,450,732.03
Mortgage Constant	0.0057
DSCR Loan Amount	$ 21,292,123.56
LTV Loan	$ 18,134,150.36
Take Out Loan Amount	**$ 18,134,150.36**
Debt Service	$ 1,235,564.53
Interim Loan Allowed (LTC)	**$ 22,683,069.40**
Loan Considering Equity	**$ 20,981,758.56**
INTERIM LOAN AMOUNT	**$ 18,134,150.36**
CASH FLOW	**$ 577,850.50**

COST PROFORMA	
Hard Construction Costs	
Construction Cost	$ 15,747,215.00
Hazardous Materials Abatement	$ 10,000.00
Retail Tenant Improvements	$ 509,880.00
Furniture, Fixtures and Equipment	$ 100,000.00
Other	$ -
THC	**$ 16,367,095.00**
Soft Construction Costs	
Pre-Development Feasibility Analysis	$ 31,048.00
Design Costs (Engineer, Architect, Etc)	$ 1,438,784.00
Exterior Envelope Consultant	$ 50,000.00
Reimburseables	$ 164,000.00
Signage & Fence Rental & Art & Survey	$ 87,500.00
Construction Testing	$ 115,000.00
Environmental Level 1 + Traffic Study	$ 31,925.00
Water Meter & Installation, Utility Hookups	$ 126,000.00
SCL Rebate	$ (125,000.00)
Project Management	$ 1,465,000.00
CADA Fee + Legal Fees	$ 611,575.00
MUP & Building Permit	$ 254,500.00
Builder's Risk + Liability Insurance	$ 126,414.00
Appraisal	$ 45,280.00
Sales Tax @ 8,8%	$ 1,512,319.00
Construction Contingency @	$ 824,000.00
TSC	**$ 6,758,345.00**
Financing and Contingency	
Bank Costs - Counsel, Escrow Title	$ 76,000.00
Interim Loan Fee	$ 195,000.00
Interest During Construction	$ 1,681,171.00
Interest Reserve (in months)	$ 430,939.00
Oan Subsidy and P&Y Payment	$ 50,206.00
Income Offset	$ (160,639.00)
Bank Inspection	$ 30,000.00
Real Estate Taxes (incl. abatement fee)	$ 67,580.00
Space Planning	$ 46,500.00
Lease Comissions & Opening	$ 50,000.00
LeaseUp/Marketing/StartUp/Allowances	$ 100,000.00
Soft Cost Contingency	$ 174,005.00
Equity Raising & PR	$ 84,450.00
TFC	**$ 2,825,212.00**
TOTAL CONSTRUCTION COST	**$ 25,950,652.00**
Land Value	
Land	$ 735,312.00
TOTAL PROJECT COST + LAND	**$ 26,685,964.00**

SOURCES AND METRICS NMTC	
Sources of Funds	
Project Cost	$ 26,685,964.00
Loan Amount	**$ 18,134,150.36**
Equity Required	$ 8,551,813.64
Patient Equity	**$ 4,879,480.00**
2nd Tranche Equity	**$ 824,725.44**
TOTAL FUNDS	**$ 23,838,355.80**
Feasibility Metrics	
Profit	$ (2,507,096.85)
Profit Margin	-9.39%
Cash Flow Distribution	
Patient Equity Cash	$ -
2nd Tranche Equity Cash	$ 577,850.50
Patient Equity Return	**0.00%**
2nd Tranche Equity Return	70.07%
Cash on Cash	**6.80%**
IRR (Levered)	**14.18%**
IRR (Levered)	**8.67%**

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL										
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2018**		**2019**
Gross Income (growth)										
Market Housing	$ 739,855.05	$ 758,351.43	$ 777,310.22	$ 796,742.97	$ 816,661.54	$ 837,078.08	$ 858,005.04	$ 1,045,395.82		$ 1,071,530.72
Affordable Housing	$ 359,160.00	$ 368,139.00	$ 377,342.47	$ 386,776.04	$ 396,445.44	$ 406,356.57	$ 416,515.49	$ 507,483.68		$ 520,170.77
Condominium Units	$ 1,125,196.23	$ 1,153,326.13	$ 1,182,159.29	$ 1,211,713.27	$ 1,242,006.10	$ 1,273,056.25	$ 1,304,882.66	$ 1,589,872.81		$ 1,629,619.63
Retail	$ 116,925.60	$ 119,848.74	$ 122,844.96	$ 125,916.08	$ 129,063.98	$ 132,290.58	$ 135,597.85	$ 165,212.81		$ 169,343.13
Monthly Parking	$ 238,260.00	$ 244,216.50	$ 250,321.91	$ 256,579.96	$ 262,994.46	$ 269,569.32	$ 276,308.55	$ 336,655.14		$ 345,071.52
Total Income	**$ 2,579,396.88**	**$ 2,643,881.80**	**$ 2,709,978.85**	**$ 2,777,728.32**	**$ 2,847,171.53**	**$ 2,918,350.81**	**$ 2,991,309.58**	**$ 3,644,620.27**		**$ 3,735,735.77**
Vacancy/Credit Loss										
Market Housing	$ (466,108.68)	$ (37,917.57)	$ (38,865.51)	$ (39,837.15)	$ (40,833.08)	$ (41,853.90)	$ (42,900.25)	$ (52,269.79)		$ (53,576.54)
Affordable Housing	$ (226,270.80)	$ (18,406.95)	$ (18,867.12)	$ (19,338.80)	$ (19,822.27)	$ (20,317.83)	$ (20,825.77)	$ (25,374.18)		$ (26,008.54)
Condominium Units	$ (708,873.62)	$ (57,666.31)	$ (59,107.96)	$ (60,585.66)	$ (62,100.30)	$ (63,652.81)	$ (65,244.13)	$ (79,493.64)		$ (81,480.98)
Retail	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Monthly Parking	$ (150,103.80)	$ (12,210.83)	$ (12,516.10)	$ (12,829.00)	$ (13,149.72)	$ (13,478.47)	$ (13,815.43)	$ (16,832.76)		$ (17,253.58)
Adjusted Gross Income	**$ 1,028,039.97**	**$ 2,517,680.15**	**$ 2,580,622.15**	**$ 2,645,137.71**	**$ 2,711,266.15**	**$ 2,779,047.80**	**$ 2,848,524.00**	**$ 3,470,649.89**		**$ 3,557,416.14**
Operating Expenses (growth)										
Market Housing	$ (183,648.00)	$ (188,239.20)	$ (192,945.18)	$ (197,768.81)	$ (202,713.03)	$ (207,780.86)	$ (212,975.38)	$ (259,489.82)		$ (265,977.06)
Affordable Housing	$ (156,866.00)	$ (160,787.65)	$ (164,807.34)	$ (168,927.52)	$ (173,150.71)	$ (177,479.48)	$ (181,916.47)	$ (221,647.55)		$ (227,188.74)
Condominium Units	$ (279,298.00)	$ (286,280.45)	$ (293,437.46)	$ (300,773.40)	$ (308,292.73)	$ (316,000.05)	$ (323,900.05)	$ (394,640.76)		$ (404,506.78)
Less Tax Savings	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Retail	$ (17,200.00)	$ (17,630.00)	$ (18,070.75)	$ (18,522.52)	$ (18,985.58)	$ (19,460.22)	$ (19,946.73)	$ (24,303.15)		$ (24,910.73)
Monthly Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Total Expenses	**$ (637,012.00)**	**$ (652,937.30)**	**$ (669,260.73)**	**$ (685,992.25)**	**$ (703,142.06)**	**$ (720,720.61)**	**$ (738,738.62)**	**$ (900,081.28)**		**$ (922,583.31)**
Net Operating Income (time adjusted)	**$ 325,856.64**	**$ 1,864,742.85**	**$ 1,911,361.42**	**$ 1,959,145.46**	**$ 2,008,124.09**	**$ 2,058,327.19**	**$ 2,109,785.37**	**$ 2,570,568.61**		**$ 2,634,832.83**
Debt Service (time adjusted)	$ (1,235,564.53)	$ (1,235,564.53)	$ (1,235,564.53)	$ (1,235,564.53)	$ (1,235,564.53)	$ (1,235,564.53)	$ (1,235,564.53)	$ (1,235,564.53)		$ (1,235,564.53)
Before Tax Cash Flow	$ (909,707.89)	$ 629,178.31	$ 675,796.89	$ 723,580.92	$ 772,559.56	$ 822,762.66	$ 874,220.84	$ 1,335,004.08		$ 1,399,268.29
Principal	$ 244,283.23	$ 258,062.72	$ 272,619.49	$ 287,997.37	$ 304,242.69	$ 321,404.37	$ 339,534.10	$ 526,667.34		$ 556,375.52
Less Depreciation	$ (598,709.94)	$ (718,451.93)	$ (718,451.93)	$ (718,451.93)	$ (718,451.93)	$ (718,451.93)	$ (718,451.93)	$ (718,451.93)		$ (718,451.93)
Taxable Income (or Loss)	$ (1,264,134.60)	$ 168,789.11	$ 229,964.45	$ 293,126.36	$ 358,350.32	$ 425,715.10	$ 495,303.01	$ 1,143,219.49	$ 18,458,633.63	$ 1,237,191.88
Tax Benefit	$ 632,067.30								$ (2,768,795.04)	
Tax Investment Credit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Cash Flow	$ (909,707.89)	$ 629,178.31	$ 675,796.89	$ 723,580.92	$ 772,559.56	$ 822,762.66	$ 874,220.84	$ 1,335,004.08		$ 1,399,268.29
After Tax Cash Flow	**$ (277,640.59)**	**$ 629,178.31**	**$ 675,796.89**	**$ 723,580.92**	**$ 772,559.56**	**$ 822,762.66**	**$ 874,220.84**	**$ 1,335,004.08**	**$ (2,768,795.04)**	**$ 1,399,268.29**
Changes in Capital	**$ (5,950,849.31)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 19,123,149.72**	**$ -**
Total Benefit	**$ (6,228,489.90)**	**$ 629,178.31**	**$ 675,796.89**	**$ 723,580.92**	**$ 772,559.56**	**$ 822,762.66**	**$ 874,220.84**	**$ 1,335,004.08**	**$ 16,354,354.67**	**$ 1,399,268.29**
Cumulative Benefit	**$ (6,228,489.90)**	**$ (5,599,311.58)**	**$ (4,923,514.70)**	**$ (4,199,933.78)**	**$ (3,427,374.22)**	**$ (2,604,611.56)**	**$ (1,730,390.72)**	**$ 7,277,205.79**	**$ 23,631,560.47**	**$ 8,676,474.09**

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL

INCOME PROFORMA	
Annual Gross Income	
Market Housing	$ 739,855.05
Affordable Housing	$ 359,160.00
Condominium Units	$ 1,125,196.23
Retail	$ 116,925.60
Monthly Parking	$ 238,260.00
TGI	**$ 2,579,396.88**
Vacancy	
Market Housing	$ 36,992.75
Affordable Housing	$ 17,958.00
Condominium Units	$ 56,259.81
Retail	$ 5,846.28
Monthly Parking	$ 11,913.00
Total Vacancy	**$ 128,969.84**
AGI	**$ 2,450,427.04**
Operating Expenses	
Market Housing	$ 183,648.00
Affordable Housing	$ 156,866.00
Condominium Units	$ 279,298.00
Less Tax Savings	$ (240,148.80)
Retail	$ 17,200.00
Monthly Parking (included in residential)	$ -
TOE	**$ 396,863.20**
NOI	**$ 2,053,563.84**
CAPITALIZED VALUE	**$ 27,380,851.15**
Take Out Loan	
Annual Debt Service Allowed (DSC)	$ 1,642,851.07
Mortgage Constant	0.0057
DSCR Loan Amount	$ 24,111,818.90
LTV Loan	$ 20,535,638.36
Take Out Loan Amount	**$ 20,535,638.36**
Debt Service	$ 1,399,189.15
Interim Loan Allowed (LTC)	**$ 22,683,069.40**
Loan Considering Equity	**$ 18,779,231.33**
INTERIM LOAN AMOUNT	**$ 18,779,231.33**
CASH FLOW	**$ 654,374.68**

COST PROFORMA	
Hard Construction Costs	
Construction Cost	$ 15,747,215.00
Hazardous Materials Abatement	$ 10,000.00
Retail Tenant Improvements	$ 509,880.00
Furniture, Fixtures and Equipment	$ 100,000.00
Other	$ -
THC	**$ 16,367,095.00**
Soft Construction Costs	
Pre-Development Feasibility Analysis	$ 31,048.00
Design Costs (Engineer, Architect, Etc)	$ 1,438,784.00
Exterior Envelope Consultant	$ 50,000.00
Reimburseables	$ 164,000.00
Signage & Fence Rental & Art & Survey	$ 87,500.00
Construction Testing	$ 115,000.00
Environmental Level 1 + Traffic Study	$ 31,925.00
Water Meter & Installation, Utility Hookups	$ 126,000.00
SCL Rebate	$ (125,000.00)
Project Management	$ 1,465,000.00
CADA Fee + Legal Fees	$ 611,575.00
MUP & Building Permit	$ 254,500.00
Builder's Risk + Liability Insurance	$ 126,414.00
Appraisal	$ 45,280.00
Sales Tax @ 8,8%	$ 1,512,319.00
Construction Contingency @	$ 824,000.00
TSC	**$ 6,758,345.00**
Financing and Contingency	
Bank Costs - Counsel, Escrow Title	$ 76,000.00
Interim Loan Fee	$ 195,000.00
Interest During Construction	$ 1,681,171.00
Interest Reserve (in months)	$ 430,939.00
Oan Subsidy and P&Y Payment	$ 50,206.00
Income Offset	$ (160,639.00)
Bank Inspection	$ 30,000.00
Real Estate Taxes (incl. abatement fee)	$ 67,580.00
Space Planning	$ 46,500.00
Lease Comissions & Opening	$ 50,000.00
LeaseUp/Marketing/StartUp/Allowances	$ 100,000.00
Soft Cost Contingency	$ 174,005.00
Equity Raising & PR	$ 84,450.00
TFC	**$ 2,825,212.00**
TOTAL CONSTRUCTION COST	**$ 25,950,652.00**
Land Value	
Land	$ 735,312.00
TOTAL PROJECT COST + LAND	**$ 26,685,964.00**

SOURCES AND METRICS LIHTC + NMTC	
Sources of Funds	
Project Cost	$ 26,685,964.00
Loan Amount	**$ 18,779,231.33**
Equity Required	$ 7,906,732.67
Patient Equity	**$ 4,879,480.00**
2nd Tranche Equity	**$ 3,027,252.67**
TOTAL FUNDS	**$ 26,685,964.00**
Feasibility Metrics	
Profit	$ 694,887.15
Profit Margin	2.60%
Cash Flow Distribution	
Patient Equity Cash	$ -
2nd Tranche Equity Cash	$ 654,374.68
Patient Equity Return	**0.00%**
2nd Tranche Equity Return	21.62%
Cash on Cash	**7.70%**
IRR (Levered)	**20.67%**
IRR (Unlevered)	**9.53%**

WELCH PLAZA APARTMENTS AND CONDOMINIUM - HOUSING/RETAIL										
	2004	2005	2006	2007	2008	2009	2010	2018		2019
Gross Income (growth)										
Market Housing	$ 739,855.05	$ 758,351.43	$ 777,310.22	$ 796,742.97	$ 816,661.54	$ 837,078.08	$ 858,005.04	$ 1,045,395.82		$ 1,071,530.72
Affordable Housing	$ 359,160.00	$ 368,139.00	$ 377,342.47	$ 386,776.04	$ 396,445.44	$ 406,356.57	$ 416,515.49	$ 507,483.68		$ 520,170.77
Condominium Units	$ 1,125,196.23	$ 1,153,326.13	$ 1,182,159.29	$ 1,211,713.27	$ 1,242,006.10	$ 1,273,056.25	$ 1,304,882.66	$ 1,589,872.81		$ 1,629,619.63
Retail	$ 116,925.60	$ 119,848.74	$ 122,844.96	$ 125,916.08	$ 129,063.98	$ 132,290.58	$ 135,597.85	$ 165,212.81		$ 169,343.13
Monthly Parking	$ 238,260.00	$ 244,216.50	$ 250,321.91	$ 256,579.96	$ 262,994.46	$ 269,569.32	$ 276,308.55	$ 336,655.14		$ 345,071.52
Total Income	**$ 2,579,396.88**	**$ 2,643,881.80**	**$ 2,709,978.85**	**$ 2,777,728.32**	**$ 2,847,171.53**	**$ 2,918,350.81**	**$ 2,991,309.58**	**$ 3,644,620.27**		**$ 3,735,735.77**
Vacancy/Credit Loss										
Market Housing	$ (466,108.68)	$ (37,917.57)	$ (38,865.51)	$ (39,837.15)	$ (40,833.08)	$ (41,853.90)	$ (42,900.25)	$ (52,269.79)		$ (53,576.54)
Affordable Housing	$ (226,270.80)	$ (18,406.95)	$ (18,867.12)	$ (19,338.80)	$ (19,822.27)	$ (20,317.83)	$ (20,825.77)	$ (25,374.18)		$ (26,008.54)
Condominium Units	$ (708,873.62)	$ (57,666.31)	$ (59,107.96)	$ (60,585.66)	$ (62,100.30)	$ (63,652.81)	$ (65,244.13)	$ (79,493.64)		$ (81,480.98)
Retail	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Monthly Parking	$ (150,103.80)	$ (12,210.83)	$ (12,516.10)	$ (12,829.00)	$ (13,149.72)	$ (13,478.47)	$ (13,815.43)	$ (16,832.76)		$ (17,253.58)
Adjusted Gross Income	**$ 1,028,039.97**	**$ 2,517,680.15**	**$ 2,580,622.15**	**$ 2,645,137.71**	**$ 2,711,266.15**	**$ 2,779,047.80**	**$ 2,848,524.00**	**$ 3,470,649.89**		**$ 3,557,416.14**
Operating Expenses (growth)										
Market Housing	$ (183,648.00)	$ (188,239.20)	$ (192,945.18)	$ (197,768.81)	$ (202,713.03)	$ (207,780.86)	$ (212,975.38)	$ (259,489.82)		$ (265,977.06)
Affordable Housing	$ (156,866.00)	$ (160,787.65)	$ (164,807.34)	$ (168,927.52)	$ (173,150.71)	$ (177,479.48)	$ (181,916.47)	$ (221,647.55)		$ (227,188.74)
Condominium Units	$ (279,298.00)	$ (286,280.45)	$ (293,437.46)	$ (300,773.40)	$ (308,292.73)	$ (316,000.05)	$ (323,900.05)	$ (394,640.76)		$ (404,506.78)
Less Tax Savings	$ 240,148.80	$ 246,152.52	$ 252,306.33	$ 258,613.99	$ 265,079.34	$ 271,706.32	$ 278,498.98	$ -		$ -
Retail	$ (17,200.00)	$ (17,630.00)	$ (18,070.75)	$ (18,522.52)	$ (18,985.58)	$ (19,460.22)	$ (19,946.73)	$ (24,303.15)		$ (24,910.73)
Monthly Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Total Expenses	**$ (396,863.20)**	**$ (406,784.78)**	**$ (416,954.40)**	**$ (427,378.26)**	**$ (438,062.72)**	**$ (449,014.28)**	**$ (460,239.64)**	**$ (900,081.28)**		**$ (922,583.31)**
Net Operating Income (time adjusted)	**$ 525,980.64**	**$ 2,110,895.37**	**$ 2,163,667.75**	**$ 2,217,759.45**	**$ 2,273,203.43**	**$ 2,330,033.52**	**$ 2,388,284.36**	**$ 2,570,568.61**		**$ 2,634,832.83**
Debt Service (time adjusted)	$ (1,399,189.15)	$ (1,399,189.15)	$ (1,399,189.15)	$ (1,399,189.15)	$ (1,399,189.15)	$ (1,399,189.15)	$ (1,399,189.15)	$ (1,399,189.15)		$ (1,399,189.15)
Before Tax Cash Flow	$ (873,208.51)	$ 711,706.22	$ 764,478.60	$ 818,570.30	$ 874,014.28	$ 930,844.37	$ 989,095.21	$ 1,171,379.46		$ 1,235,643.68
Principal	$ 276,633.42	$ 292,237.72	$ 308,722.22	$ 326,136.58	$ 344,533.25	$ 363,967.64	$ 384,498.27	$ 596,413.39		$ 630,055.79
Less Depreciation	$ (597,790.11)	$ (717,348.13)	$ (717,348.13)	$ (717,348.13)	$ (717,348.13)	$ (717,348.13)	$ (717,348.13)	$ (717,348.13)		$ (717,348.13)
Taxable Income (or Loss)	$ (1,194,365.20)	$ 286,595.80	$ 355,852.69	$ 427,358.75	$ 501,199.40	$ 577,463.87	$ 656,245.34	$ 1,050,444.71	$ 18,477,030.19	$ 1,148,351.33
Tax Benefit	$ 597,182.60								$ (2,771,554.53)	
Tax Investment Credit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
Cash Flow	$ (873,208.51)	$ 711,706.22	$ 764,478.60	$ 818,570.30	$ 874,014.28	$ 930,844.37	$ 989,095.21	$ 1,171,379.46		$ 1,235,643.68
After Tax Cash Flow	**$ (276,025.91)**	**$ 711,706.22**	**$ 764,478.60**	**$ 818,570.30**	**$ 874,014.28**	**$ 930,844.37**	**$ 989,095.21**	**$ 1,171,379.46**	**$ (2,771,554.53)**	**$ 1,235,643.68**
Changes in Capital	**$ (3,513,488.02)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 17,528,042.71**	**$ -**
Total Benefit	**$ (3,789,513.93)**	**$ 711,706.22**	**$ 764,478.60**	**$ 818,570.30**	**$ 874,014.28**	**$ 930,844.37**	**$ 989,095.21**	**$ 1,171,379.46**	**$ 14,756,488.18**	**$ 1,235,643.68**
Cumulative Benefit	**$ (3,789,513.93)**	**$ (3,077,807.71)**	**$ (2,313,329.11)**	**$ (1,494,758.81)**	**$ (620,744.53)**	**$ 310,099.84**	**$ 1,299,195.04**	**$ 10,498,273.82**	**$ 25,254,762.00**	**$ 11,733,917.50**