IMPEDIMENTS TO INFILL DEVELOPMENT: AN ANALYSIS OF INFILL IMPLEMENTATION POLICIES

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IMPEDIMENTS TO INFILL DEVELOPMENT: AN ANALYSIS OF INFILL IMPLEMENTATION POLICIES

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Abstract

of

IMPEDIMENTS TO INFILL DEVELOPMENT: AN ANALYSIS OF INFILL IMPLEMENTATION POLICIES

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Christopher J. Dickinson

Communities throughout California are placing an emphasis on promoting infill development. These communities realize that successful compact development is a key factor in reversing negative byproducts of sprawling development patterns, such as traffic congestion, reductions in open space, and an inefficient use of public infrastructure. Many communities create infill implementation strategies that detail policies to promote infill development. Nevertheless, studies have provided little detail regarding which policy approaches best infill development.

The purpose of this thesis is to identify impediments to infill development and to discover which policy tools are most effective in bridging the gap between a proposed project and a constructed project. To analyze the effectiveness, I conduct a feasibility study for a hypothetical mixed-use infill development in downtown Sacramento, California.

The primary finding of this thesis is policy tools that reduce development costs or reduce the developer's initial cash outlay better improve the feasibility of an infill project than do tools that reduce financing costs throughout the absorption period. This thesis

points the way toward a better understanding of the effectiveness of individual policies on development feasibility and provides a basis for comparing and contrasting those policies.

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Chapter 1

INTRODUCTION

Communities throughout California are placing an emphasis on promoting infill development. These communities realize that successful compact development is a key factor in reversing negative byproducts of sprawling development patterns, such as traffic congestion, reductions in open space, and an inefficient use of public infrastructure. Many communities create infill implementation strategies that detail policies to promote infill development. A lack of literature exists that explains the effectiveness of such policies. The purpose of this thesis is to identify impediments to infill development and to discover which policy tools are most effective in bridging the gap between a proposed project and a constructed project.

The Municipal Research and Services Center of Washington define infill development as "the process of developing vacant or under-used parcels within existing urban areas that are already largely developed" (Municipal Research and Services Center of Washington [MRSC], 2009, ¶ 2). However, for this thesis, I expand upon this definition to read as "the process of developing vacant or under-used parcels within existing urban areas into compact developments with access to public transportation that promotes mixed uses and walkability." It is important to understand why using the standard definition is not sufficient for this thesis. Simply developing vacant and under-used parcels that conform to status quo development patterns will not significantly reduce byproducts of sprawl. Promoting walkability and access to public transportation are critical to reducing traffic congestion and reducing carbon emissions. I use the terms

infill development, sustainable development, and smart growth interchangeably because the major principles of each concept are similar to the definition I provided. This thesis will primarily focus on the housing component of infill development, although a small portion will emphasize retail as a component of a development because street front retail is an important aspect of a successful infill development. Ground floor retail can activate the streetscape and add to the vibrancy of an urban area.

Successful implementation of infill development is important for cities across the United States as many of the byproducts of infill development are beneficial. People are what make urban areas effervescent and a population reaching a critical mass is what allows a variety of competing businesses to thrive while existing in a short proximity to one another. "The market for infill housing in urban locations is generally regarded as more lifestyle-driven than product driven" (Suchman, D, 2002, p. 10), thus the market segment for infill development primarily consists of young singles and couples who seek the vast array of restaurants, nightlife, and activities offered by urban living. Renewing the population with wealthier households creates an upward cycle of wealth and prosperity in the region, known as gentrification. This new base of disposable income leads to many social benefits including greater feasibility of small businesses, a higher property tax base, and increases of sales tax revenue for the city and county. A consequence of gentrification is the displacement of low-income people who cannot afford increasing rents of the improving area. In addition to creating a more vibrant and economically strong downtown, another benefit of infill development is its potential to curtail pollution and the effects thereof.

California's state legislature and Governor identify compact development as a key to reducing chances global warming will have an adverse effect upon the state. California Assembly Bill 32 of 2006 recognizes greenhouse gas emissions as a cause of global warming and sets a goal to reduce those greenhouse gas emissions to 1990 levels by 2020. This bill does not set methods to achieve this goal, but sets the precedent for future legislation. Subsequently, Senate Bill 375 of 2008 identifies land use patterns as a cause of dependence on the automobile and sets forth methods to induce compact development in hopes to reduce greenhouse gas emissions.

Cervero (2007) found that people living within one half mile of a rail transit station were "four times as likely to commute by rail as those living within a distance oriented to bus access (that is a half to 3 miles) and nearly six times as likely as those living beyond 3 miles" (pp. 153 – 154). A negative correlation exists between unit density and vehicle miles traveled (VMT) per day: as density increases the average VMT per day decreases (Ewing, Bartholomew, Winkelman, Walters, Chen, 2008, p. 62). Another benefit of infill development is that it provides the framework to allow people to use modes of mass transportation and to walk to many destinations, causing a decrease in aggregate CO_2 emissions.

While sprawl also gets blame for a "loss of habitat, wetlands, prime agriculture land, and the beauty of open spaces" (Levine, 2006, p. 1), there are many benefits of suburban living. Single-family homes provide more privacy than compact development, school systems are typically better, and crime rates are usually lower. The majority of the population prefers suburban living to compact living, which infers they hold the

benefits of suburban living in higher esteem than those of compact living. However, past preferences do not necessarily predict future growth patterns. Changing demographics are the rationale for an increase of market demand for infill developments. "Smaller families, empty nesters, childless married couples, and singles are growing demographic groups seeking housing that reflects their lifestyle" (Farris, 2001, p. 6).

Developers have taken notice of the market's changing demographics. Suchman identifies four reasons developers show interest in pursuing urban housing: "1) there is money available and money to be made by developers; 2) the returns are good, often because government agencies are cooperative; 3) infill developments are often popular, highly visible project that replace unwanted land uses…; 4) there are market opportunities for infill housing" (2002, p. 10). Interest exists on behalf of the developers, but many impediments make realization of a project very difficult.

Before going further, it is important to mention my background. For the past five years, I have been working in the real estate industry as a commercial real estate agent marketing land properties throughout the state of California. I underwrite land and interact with developers on a daily basis. Over these past five years, I have become very familiar with construction costs of various real estate product-types and with developer's concerns throughout the development process. There are times throughout this paper where I will cite my experience, although I try to avoid doing so for objectivity purposes.

Thesis Layout

This thesis consists of four remaining chapters: a literature review, an explanation of the methodology, an analysis of the data, and a conclusion and recommendations. Below are brief descriptions of each section.

The literature review of this thesis focuses on two concepts: identifying factors that make infill development difficult and the policy tools available to increase the probability of infill projects coming to fruition. These impediments include both high construction costs and market characteristics. High construction costs consist of podium parking, necessity of steel construction, and infrastructure upgrade requirements. Market characteristics include low demand from patrons in comparison to single-family homes, difficulty in obtaining project financing, and other obstacles. Policy tools available include reducing requirements such as parking and low-income housing, a variety of financial tools to reduce developer cost, and reducing development impact fees.

The methodology of this thesis is a feasibility analysis for a hypothetical condominium project with a retail component in midtown Sacramento. This feasibility study consists of a market analysis and a pro-forma analysis. The market analysis focuses on current market conditions of Sacramento and is the basis for price point assumptions. A baseline pro-forma depicts project feasibility. This baseline analysis depicts the project without aid from policy tools. Variations of this baseline analysis apply individual policy tools to the project in order to identify the affects these policy tools have on the feasibility of the project. The analysis section is merely the execution of the methodology.

The Conclusion and Recommendations chapter discusses the findings of the analysis. This section discusses the effectiveness of each policy by explaining to what degree the tool was able to increase the internal rate of return of the project. There is a brief explanation of how the results of the analysis may differ when varying baseline assumptions. Finally, this section discusses how the results of this study may affect municipalities that are trying to promote infill development.

Chapter 2

LITERATURE REVIEW

Introduction

A vast amount of literature exists on infill development, most of it explaining the societal benefits associated with infill style growth. Most literature references impediments to infill, but rarely explains these issues in depth. Literature that explains impediments are rarely academic. Instead, most studies are government or private sector interest groups' anecdotal documents describing the experiences of people who develop projects within their community or who belong to an interest group. Commentators largely agree about the impediments to infill development. It is hard to find literature that thoroughly explains policy tools that can overcome the hurdles of infill development. The majority of these documents are infill implementation strategies written by municipalities.

These documents, along with documents describing impediments to infill, lack detail. An example of this lack of detail is in the discussion of higher construction costs. Some commentators discuss construction cost per square foot of infill development in relation to that of single-family construction, yet these authors only compare vertical construction costs. Vertical construction costs are only those costs that occur above ground, they exclude infrastructure, parking, and off site improvements. Thus, these studies lack detail of the full scope of cost discrepancies between infill development and single-family construction. This thesis intends to bring a higher level of understanding of the expenses associated with development by breaking down major components of

development expense. In addition, existing descriptions of policy tools are vague; simply stating that reducing parking space requirements or asserting that aiding in financing increases project feasibility does not allow comparison of policy tools. This thesis aims to bring precision to this aspect of the analysis.

The literature review has three sections – positive factors increasing demand for infill development, impediments to infill development, and policy tools available to aid infill development. I acknowledge that the review is not comprehensive because I omit consideration of political hurdles. Local opposition to a project has the potential to be a significant hurdle and the concerns of existing residents may be valid; however, there are limits to what I can consider in a single thesis. Accordingly, this paper focuses on obstacles that are quantifiable in nature pertaining directly to economic feasibility of a project.

Positive Factors for Infill Development

Not all is doom and gloom when considering the feasibility of infill development. Some market characteristics indicate growing demand for urban living. "Just one-quarter of households are families with children, and families make up only 70 percent of all households, compared with 81 percent in 1970 and 90 percent in 1940. Of the remaining 30 percent, 60 percent live alone" (Farris, 2001, P. 6). Nelson (2006) estimates that single person households will increase to approximately 30% by 2025 (p. 394). In addition, Nelson explains that a larger portion of the population is and increasingly will be elderly. Leinberger (2008) reiterates Nelson's sentiments by claiming 850,000 people will turn sixty-five per year between 2007 and 2011 and between 2012 and 2020 this

number will increase to 1,500,000 people per year (p. 89). These demographics demand the lifestyle of urban living, thus as these segments of the population grow the demand for urban living will also grow.

In addition to changes in demographics, Nelson also indicates, "price appreciation rates for condominiums and cooperatives are substantially higher than those of detached and townhouse homes in all regions" (2006, p. 395). Leinberger echoes Nelson by saying, "High-end households seem to be willing to pay the same absolute dollars for a…suburban palace near golf courses and behind guarded gates as they pay for condominiums" (2008, p.98). Leinberger goes on to cite the existence of premiums paid for condominiums over single-family homes on a per square foot basis in various markets throughout the United States and this premium is his evidence of pent-up demand for urban living. Leinberger does not address the inverse relationship that exists between unit size and price per square foot of assets in the same class. This relationship exists whether the unit is a for-rent apartment or a for-sale condominium or for-sale housing. An excellent example of this relationship is in a for-rent apartment complex. Studio apartments and one-bedroom apartments will command a higher rent per square foot over that of larger units even though the overall rent is a lower aggregate number. The same is true of for-sale condominiums in the same complex. Another factor to consider when Nelson claims that price appreciation of condominiums is greater than that of single-family homes is that the appreciation occurred during sizzling housing market from 2002 to 2006. This period was fraught with the issuance of high-risk loans. These loans artificially inflated housing prices across all sectors and at the beginning of the increasing

market, condominium prices were lower than that of single-family homes. Thus, when the single-family homes became unattainable for many Americans, they settled for condominiums causing an increase in condominium prices. Starting with a lower figure means the same dollar increase in price appreciation will result in higher percent increase for the lower priced asset. Nelson does not state if he accounts for the effect of condominium conversions. Many apartment houses converted to condominiums causing values to double or even triple, which may overstate the growth rate of condominium units.

Impediments to Infill Development

Many impediments exist to infill development and there appears to be considerable consensus among authors regarding high construction costs, difficulties obtaining financing, and a lack of demand. Lack of demand for infill refers to current demand; conversely as explained above, changing demographics indicate an increase in demand for infill development in coming decades.

Lack of Demand – Demographics of the US population are changing and many predict that urban development will be a growing market segment in coming years. Yet currently, a vast majority of the population prefers suburban housing. Nelson (2006) claims, "Housing preference surveys routinely find that most people prefer single-family detached homes on large lots" (p. 395) and that the percentage of the population that prefers apartment/condominium living typically falls between 9 and 18 percent (Nelson, (2006, pp. 395 – 396). The two 1990s surveys that Nelson cites were at a time when a significant portion of the baby boomer population still had children at home, thus as this

child population becomes more independent, the baby boomers will prefer urban living. Later in the article, Nelson cites the United States Census Bureau that found that 25.4 percent of the population was actually living in apartments or condominiums in 2003. The surveys and the Census findings do not occur at the same point in time. It is significant to point out if 9 to 18 percent of the population prefer apartment or condominium living but 25.4 percent are actually living in apartments or condominiums, it is reasonable to assume that a large percentage of the 25.4 percent are unsatisfied with their dwelling. These people may be in a state of transition to suburban living and may prefer suburban living.

Suburban living has merit; people seek privacy, better schools, and lower crime rates. "A 1991 Toledo (OH) survey of 408 home sellers found that the top five reasons for moving were to (1) seek a larger house, (2) seek a better school, (3) change jobs, (4) seek a better style home, and (5) seek a safer neighborhood" (Farris, 2001, p. 7). People place a greater weight on the personal benefits of suburban living than they do on the social and environmental benefits of urban living. Everyone grows up with the perception of the American Dream as owning a house with a yard. A paradigm shift away from the current perception of the American Dream may be the largest hurdle that infill development faces.

Construction Costs – Infill development is more costly than single-family construction. "Construction costs are approximately $75 per square foot for a three story-building, $100 per square foot for a four-story building and $175 per square foot for a high-rise" (Suchman, 2002, p. 14). A drastic jump in construction costs exists between

medium height buildings and high-rise buildings because of the type of frame construction. Typically, wood framing is adequate up to five stories or 50 feet (Wheeler, 2001, p. 19) and beyond five stories steel from is necessary because of strength requirements. Conversely, a typical cost for a single-family home is $60 per square foot. Construction costs for single-family homes are significantly lower than that of infill development. These costs reference vertical hard costs of the building and units, therefore these calculations do not include infrastructure, parking, soft costs, environmental remediation, and entitlement expenses. Soft costs are costs that are not direct construction costs including financing, architectural, engineering, legal fees and marketing expenses.

Not only are single-family homes cheaper to build, but they are easier to implement from a cash flow perspective as well. The cash flow difficulty of infill development stems from the fact that construction commences on all units at the same time because the units are part of the same building; whereas, single-family development can occur in phases from both an infrastructure standpoint and the units, which reduces market risk and financing costs. The ability to phase the project lowers the risk for the developer and the lender because phasing allows less capital to be susceptible to changing market conditions at any given time.

Parking – Parking is a major consideration for infill development because many infill developments require podium parking (parking structure) in order to fit an adequate amount of parking within a development and podium parking is expensive in comparison to surface parking. In 2008, the average cost of a parking structure in the United States

was “$15,000 per space” (Victoria Transport Policy Institute, 2009, p. 5.4-2); however, a large amount of variability exists with between studies. The Victoria Transport Policy Institute cites a source that found “construction costs ranging from $13,712 to $31,500 per space at a California university between 1990 and 2002” (VTPI, 2009, p.5.4-3). My experiences underwriting development projects in the Sacramento region find parking costs range from $25,000 to $32,000 per space. Again, these cost estimates only reflect hard costs so soft costs and financing costs are additional. Parking is critical to infill development as it allows the property to maximize the use of the land; without parking structures, densities would not exceed 20 units per acre.

The reason densities would not exceed 20 dwelling units per acre without parking structures is that cities set arbitrary parking requirements for land uses. “Planners typically use generic standards that apply to general land use categories (e.g., residential, office, retail)” (United States Environmental Protection Agency, 1999, p. 4). Examples of these generic standards are two spaces per residence, four spaces per 1,000 square feet of office space, five spaces per 1,000 square feet of retail space, and fifteen spaces per 1,000 of restaurant space. These requirements constrain development because surface parking consumes an enormous amount of space. Suburban developments require these standards because people are dependent upon automobiles and these requirements are feasible because surface parking is inexpensive, roughly $1,500 per space. Requirements need not be this intense for urban developments as residents have access to transportation alternatives and retailers rely more on activation of the street front rather than patrons arriving by automobile. Street front activation refers to pedestrian oriented ground floor

retail where shops have limited frontage to maximize the number of retailers at one location. Retailers often provide amenities such as tables, benches, fountains, and visual architectural designs on the street front for people to congregate.

Shoup and Manville state that "in order to thrive, a central business district must receive a critical mass of people every day but do so without clogging itself…off-street parking is the action taken to reduce congestion but because land is so expensive in downtown regions, and off-street parking is such a large upfront expense that firms make the rational decision to locate outside the central business district (CBD) where it will be cheaper to locate" (Shoup, D., Manville, M., 2004, p. 4). In addition to growth happening outside the CBD, parking requirements make downtowns "little more than a group of buildings, each a destination in its own right, to be parked at and departed from, and not part of some larger whole" (Shoup, D.,Manville, M., 2004, p. 8).

This is not to say that best practices for infill developments are void of parking or requirements, but applying generic requirements is not efficient. Developers want to provide parking for four reasons. First, a loan may be hard to obtain because lenders have their own parking requirements for properties they finance (US EPA, 1999a, p. 2). Second, a lack of parking creates uncertainty of long-term marketability of a project (US EPA, 1999a, p. 2). Third, "residents may fear that parking will spill over into surrounding residential neighborhoods (US EPA, 1999a, p. 2). Finally, condominiums with parking increase market price of units by $39,000 over units that do not have parking (VTPI, 2009, p. 5.4-18). The struggle for developers and cities is to find the

right mix of parking that will allow for a long-term successful project without a parking shortage while keeping costs as low as possible.

Difficulty Obtaining Financing – Financing is difficult to obtain for infill development because of "comparatively high development costs (especially upfront costs); lenders' lack of familiarity and experience with the products; a dearth of good market research; environmental problems; and the absence of comparables on which to base appraisals" (Suchman, 2002, p. 17). In addition, mixed use projects are difficult to finance because "lenders tend to specialize in one type of real estate development … (because) the financial instruments and institutions underlying American Development isolate components of the built environment to better scrutinize their risk" (Suchman, 2002, p. 18). Suchman goes on to explain that financing luxury products and low income products are the easiest to finance because luxury products are built in the best locations and a variety of state and federal incentive programs exist for the low income developments (Suchman, 2002, p. 18). Thus, obtaining financing for the largest of the population, middle-income, is the most difficult.

Impediments described above exist for the majority of infill projects; thus, I classify them as characteristics of the infill development market. The next section discusses hurdles that do not exist for the majority of infill parcels but are site specific. Site contamination, inadequate infrastructure, and parcels that are small and irregular make implementing infill projects difficult.

Infrastructure –"The term *infrastructure* covers public facilities such as streets; water, sewer, and drainage systems; parks and open space; and … schools" (Suchman,

2002, p. 83 – 84). For downtown regions, I find it necessary to expand this definition to include mass transit systems and public parking areas as these elements are crucial to achieve vibrancy. Proponents of infill tout "the ability to use existing infrastructure, but many practitioners understand infrastructure can be obsolete" (Farris, 2001, p. 14). Capacities of some public facilities are more likely to be adequate, such as the ability to provide water and process sewage because these systems require upgrading as the city grows, whether this growth is infill or suburban. Capacity of other systems, such as transit and schools systems, are more difficult to increase in infill settings because of physical constraints. Capacity of a roadway cannot increase without adding a lane and capacity of school cannot increase without adding a classroom. With land in short supply, these types of improvements are difficult. The cost of upgrading capacity of any facility is great, thus cities need to have adequate excess capacity to accommodate infill growth. Feasibility of infill development is a fine margin, so upgrading infrastructure at the developer's expense and creating and area of benefit to repay the developer is not an option as it would be in larger suburban developments. When a developer or city pays for a significant amount of infrastructure, they create an area of benefit. As new development occurs because of the new infrastructure, these projects pay fees to reimburse the cost of the new infrastructure.

Site Contamination – Sites with contamination, known as brownfield sites pose a significant challenge to developers because remediation costs have the potential to be so great they outpace the value of the land, equating to a negative land value. Before a developer acquires the land, extensive testing is necessary to discover the level of

contamination. Testing facilitates leads to the creation of an action plan to remediate the site so it is suitable for future residents and patrons. There are three phases in identifying contaminants and remediating a site. A phase one report examines the history of a parcel to determine if contamination is likely to exist on the site. If the phase one report reveals the site potentially has contaminants, a phase two report is necessary. A phase two report discusses the results of testing the soils for contamination. Phase three, is the remediation of a site. Little literature exists that examines costs of each phase. From my experience in the industry, I have found that costs of phase one are approximately $2,500 and phase two studies range from $30,000 to $50,000. Phase 3 cost is a product of the level of contamination on the site. As the level of contamination increases so does the cost. I have no personal experience with phase three clean up expenses, thus I cannot offer a range of cost. Potential expenses of a phase one and two report to simply arrive at a conclusion of "proceed" or "pass" on the acquisition of a site is to risky for many developers. The United States Environmental Protection Agency lists four advantages to brownfield development. First, discounted land price, second, low infrastructure cost, third, favorable zoning, and lastly, support for brownfield development in the form of tax credits and financing (US EPA b, 1999, p. 2 – 4). Indeed, the potential for these advantages exist, but remediation of Brownfield sites requires expertise to remediate the site and traverse the extensive network of public assistance programs. In addition, developers need to possess greater tolerance to risk. Remediation takes time, which means greater uncertainty exists about market conditions when the property is ready for vertical construction. A local example of greater risk tolerance is the Curtis Park Village.

Curtis Park Village is a 72-acre infill development in the southern portion of Sacramento where the developer is struggling to find a way to "finance the higher-than expected costs of cleaning up the toxic rail yard he bought in 2004 … (and) construction could start in 2012, 2013, or 2014" (Wasserman, 2009b). In this case, the costs of remediation have exceeded estimates and there is a three-year window for when the project will break ground, both of which are risks beyond that of typical development.

Infill Parcels may be Small and Irregular – Each infill project is unique in that the site dimensions are not uniform; therefore, the design of one project cannot be the same for the design of another project. These projects "cannot benefit from the economies of scale" (Riverside, 2003, p.2) whereas, for a suburban development, the layout of the subdivision is completed and a developer offers six to ten different designs. The developer has the option of repeating designs among different developments. The architecture becomes a sunk cost, thus reducing indirect costs of construction. Offering a small variety of homes often receives criticism as it results in boring and repetitive communities, but it is efficient in reducing costs. Similarly, many lots are too small alone, thus a developer needs to assemble small parcels to create a buildable site. Creating an assemblage often requires dealing with different landowners, which is more time consuming, more costly, and poses greater risks of failure.

Obstacles to infill development are a reality of the market place and rarely do these impediments occur in isolation. The cumulative effect of multiple impediments can make a project infeasible. The commonality of the impediments to infill development is they increase risk in some capacity. Developers and lenders accept increases in risk if the

potential return on investment is large enough to justify this risk. Policy makers have tools at their disposal that increase the return to a developer and subsequently increase feasibility of infill development. The next section examines several of these tools.

Policy Tools to Implement Infill Development

Many policy choices are available to government officials to aid in implementing infill development. Tools from reducing development impact fees to facilitating obtainment of financing create better conditions for infill development to thrive. The literature review will focus on a variety of policy tools that aid in overcoming impediments from the first half of this literature review. The majority of the information below is from infill promotion programs created by municipalities.

Market Based Incentives - The United States EPA claims that providing "incentives for people to live near their employment" (US EPA, n.d, p. 3) will promote mixed-use development. The document does not offer suggestions of policy incentives, but a recent tax credit could provide the framework for such a policy tool. The Housing and Economic Recovery Act of 2008 created a tax credit of $7,500 for first-time homebuyers that buyers pay back over fifteen years. The American Recovery and Reinvestment Act increases the tax credit to $8,000 and buyers do not repay the credit. "The California Association of Realtors issued survey results stating that 40 percent of first-time buyers would have sat out this year if they hadn't been promised the $8,000 credit" (Wasserman, 2009b, ¶ 4). It is too early to measure the level of success of the tax credit. However, the building industry and real estate interest groups urged Washington to extend the program in December of 2009 because of concerns regarding falling home

prices. This concern for falling home prices is an indication that the tax credits have a positive affect on demand. There is potential for this framework to extend into the urban development arena. A program offering a tax credit to individuals who purchase a residence in a qualifying urban development would stimulate demand for an infill market.

Facilitate Financing of Urban Development – Suchman claims that state and local governments have several financial tools available to help finance urban development. A variety of these financing tools are "tax credits for historic properties or low income housing; taxable and tax exempt bonds; housing trust funds; predevelopment grants and loans; construction loans, gap financing, soft second mortgages; credit enhancements" (Suchman, 2002, p. 88). An explanation of each financing tool follows below.

Tax Credits – First, an explanation of tax credits in general. There is often confusion between a tax credit and a tax deduction. A tax credit directly lowers tax liability of those who possess them on a dollar for dollar basis, thus a $1,000 tax credit lowers the tax liability of the holding entity by $1,000. Meanwhile, a tax deduction merely lowers taxable income, thus the deduction is only the marginal tax rate. For example, a $1,000 deduction, when the entity taking the deduction is in a 35 percent tax bracket, reduces tax liability by $350 ($1,000 x .35). Now I will review a brief example of low-income housing tax credits (LIHTC) to explain how they work. Both the state and federal government allocate tax credits annually, a multiplier of state population determines the amount they allocate per state. The IRS allocates federal credits to the states to disperse. In California, the State Treasurer allocates state and federal LIHTC via the California Tax Allocation Committee (CTCAC). The CTCAC awards the tax credits

to developers whose projects qualify. The developer sells the credits to investors in order to raise capital for the low-income housing project. An investor purchases the LIHTC below face value in order to realize a net benefit by reducing tax liability at the full face value of the tax credit. For example, an investor purchases $1,000,000 of LIHTCs for $850,000, or 85 cents on the dollar. When the investor uses the tax credits to reduce tax liability, the reduction in tax liability is the face value of the LIHTC, which in this case is an increase of approximately 17.6 percent of the purchase price. Investors use the tax credits in accordance with IRS guidelines, which for federal low-income housing credits is 10% of the credits per year.

Tax-Exempt Bonds – Most bonds issued by states and cities are tax-exempt, which means the purchaser of the bond does not pay income tax on the income generated by the bond. Bonds issued by governments typically have a low yield rate because of the tax-exempt status and the ability to repay the bond of the issuing agency. An unusual example of a tax-exempt bond is Private Activity Bonds, which government agencies issue on behalf of private businesses. "Unlike typical municipal bonds, the payment of principal and interest … is not the responsibility of the issuing government agency. Instead, it is the responsibility of the private business receiving the proceeds" (California Debt Limit Allocation Committee, n.d., ¶ 4). These bonds may not be completely tax exempt, as some states do not recognize the exemption for other state. For example, if a California public agency issues a bond, which an Idaho investor buys; Idaho may not exempt the income from state income taxation. Developer's value bond financing as the lower interest rate reduces financing costs.

Gap Financing - Lenders require estimates of project cash flow to meet certain benchmarks before they will lend on a project. One of these benchmarks is the debt-service coverage ratio (DCR). A DCR is the relationship between the net operating income (NOI) and the debt-service. For instance, if monthly NOI on an apartment complex is $10,000 and the debt-service is $8,000, then the DCR equal 1.25 ($10,000 / $8,000). During the feasibility analysis of a development project, the lender will use projections of NOI to arrive at the loan amount. Here we have monthly NOI projection of $10,000 and the lender requires a DCR of 1.25, which translates to a monthly debt service of $8,000. Assuming an amortization period of 30 years and interest rates of 5%, the lender is willing to loan $1,490,252. Suppose the development will cost $1,800,000 to construct and the developer has $100,000 in equity. In this scenario, a gap of $209,748 exists that can be financed by the municipality.

Soft Second Loan – The city can offer a soft second loan to aid the feasibility of a project. A soft second loan is similar to Gap Financing, the difference being that the structure of the payment schedule for a soft second loan can take many forms. For example, instead of a constant amount due every month, the government agency and the developer "agree to split cash-flow … after operating expenses" (Suchman, 2002, p. 88). This way the project will be able to pay down the debt of the first loan and the second loan is not creating a negative cash flow situation for the developer.

Credit Enhancements – "Credit enhancement is third-party financial support –the lender and the borrower are the first and second parties –that makes a loan, bond, or other financial instrument more creditworthy, provides access to better borrowing terms, and

can mean the difference between a project being feasible or not" (US Department of Transportation, n.d.). Credit enhancements can take the form as a line of credit or debt service guarantee from a government agency. This line of credit or debt service guarantee reduces risk to a private lender allowing the lender to finance a project at a lower interest rate. In addition, for regions with no history of successful infill projects, a credit enhancement may be the only way to obtain financing. Credit enhancers benefit developers similar to a tax-exempt bond by lowering financing cost for a project.

Allow Flexibility in Parking Requirements – Government agencies can encourage Developers to build parking structures by offering the financing options previously described. Allowing flexibility in parking requirements for infill projects will allow city officials and developers reduce total spaces provided if it is logical for the project. "One of the shortcomings of generic parking requirements is that they often do not take into account the mix of community-specific variables – density, demographics, availability of non auto transit, or the surrounding land-use mix – all of which influence demand for parking … instead, requirements are based on maximum demand for parking" (US EPA, 1999a, p. 4). If a project is located in an area of heavy pedestrian traffic, allocating parking for ground floor retail may not be necessary. Alternatives to generic parking requirements are in-lieu fees, shared parking, centralized parking, and parking freezes.

In-lieu fees are development impact fees the city charges to provide off-site parking. In this scenario, the developer will pay the city a fee per required space for the development. Construction and maintenance of the parking structure performed by the city is off-site. US EPA identifies the following benefits of in-lieu parking fees –

reduction in constructions costs, no unattractive on-site parking, parking lot use is maximized, and offers better urban design (1999a, p. 14). An in-lieu fee is only beneficial if it is cheaper than constructing the parking space. The drawback is obviously convenience for residents if the parking structure is located a significant distance from their residence. A possible option for the city is to construct a shared parking structure. Shared parking is a centralized parking structure that is in close proximity to a variety of uses, such as offices and housing. This scenario, the office employees will use the garage during the day while the residents use the garage at night. The benefit of a centralized parking structure is economies of scale during construction and maintenance. Parking Freezes are the exact opposite of parking requirements. Instead of requirement a minimum number of parking stalls, the city creates a maximum limit (US EPA, 1999a, p. 17).

Reduce Development Impact Fees – Riverside, California's Infill Strategy proposes adjusting development impact fees as a method of promoting infill development. The strategy reduces total fees from $18,424.53 to $13,805.68 per unit, a savings of 25 percent. "Fee adjustments have a greatest impact where there is a slim profit margin and reducing fees can make a project financially feasible" (City of Riverside, California, 2003, p. 5). The fee reduction is equivalent to a cash subsidy, as the city will cover the expense of lost revenue. The calculation of a development impact fee is the cost of the public facility per unit of new growth. The city estimates the annual growth that will use the capacity of the facility, accounts for the time value of money and

arrives at a cost per unit. If the city foregoes revenue, it must use funds from another source to pay for the facility fee.

Environmental Exemptions – Governor Ronald Reagan signed the California Environmental Quality Act (CEQA) into law in 1970. "CEQA encourages the protection of all aspects of the environment by requiring state and local agencies to prepare multidisciplinary environmental impact analyses and to make decisions based on those studies' findings regarding the environmental effects of the proposed action" (Bass, R., Herson, A., Bogdan, K., 1999, p. 1). CEQA is consists of three phases. Phase one is the Preliminary Review, phase two is the Initial Study, and phase 3 is the preparation of an Environmental Impact Report (EIR) or Negative Declaration. If a project requires the preparation of an EIR, then the lead agency determines the project "is not exempt from CEQA, and potentially causes significant effects on the environment that could not be addressed by a Mitigated Negative Declaration" (Bass, R., Herson, A., Bogdan, K., 1999, p. 53). A lead agency assigns a negative declaration when it determines the project will have no significant effect on the environment, thus there is no need to prepare an EIR. A lead agency issues a mitigated negative declaration when there is acknowledgement that there are environmental consequences from building the project, but the developer agrees to mitigate for the effects on the environment. The process of completing an EIR takes between 9 to 18 months (Bass, R., Herson, A., Bogdan, K., 1999, p. 8). Cost of the preparation of an EIR varies depending upon the scope of the document. I did not find any current discussions regarding cost of EIR preparation. For a developer, loss of time is a major obstacle as markets have the ability to deteriorate quickly and money is always

a concern. Senate Bill 375, passed in 2008, allows for an exemption from CEQA if a development complies with the Sustainable Communities Strategy for a region. The Sustainable Communities Strategy sets forth a land use vision that will reduce carbon emissions by creating compact communities. Thus, if a project complies with the Sustainable Communities Strategy, the developer will not have the expense of preparing an Environmental Impact Report.

This literature review shows that recognition of impediments to infill development is not a new concept. These impediments are a reality of the market place. Recognition of these impediments by municipalities has led to the creation of policy tools to help developers implement infill projects as these policies increase profit margins to justify the risk of infill development. The literature fails to explain how individual policy tools affect infill projects' feasibility. In addition, no studies compare policy tools with one another to discover which is the most efficient and or creates the largest positive effect. I intend to fill this void in the body of literature by applying policy tools to a feasibility study to discover the effects and efficiencies of policy tools.

Chapter 3

METHODOLOGY

This section provides an outline for how I will analyze the effectiveness of policy tools to overcome obstacles of infill development in the next chapter. To analyze the effectiveness, I will conduct a feasibility study for a hypothetical mixed-use infill development in downtown Sacramento. The analysis explains the process of conducting a feasibility study of an infill development. An initial analysis is the baseline to illustrate feasibility of infill development in Sacramento with no subsidies from state or local government. I then select a variety policy tools to combat the obstacles of infill development and apply them on an individual basis to the baseline feasibility study in order to observe their effectiveness on improving feasibility of infill development.

Process of Land Development

Before explaining how I conduct the feasibility analysis, it is important to explain the process of land development so the reader understands the moving parts associated with creating a project. Brueggeman and Fisher explain a four-stage development process. Stage one is the introduction to the property. Typically, a real estate broker introduces the site to the developer. Before making a decision to acquire the property, the developer will visit and inspect the site, then conduct a preliminary market study and feasibility study. If the developer perceives developing the site will result in an adequate return, usually the developer negotiates an option contract with the landowner, which gives the developer the option to purchase the land by a specific date. Sometimes a transaction occurs with just a purchase-sale agreement when there is enough time in the

due diligence period to perform necessary procedures to determine if development of the parcel is feasible. This due diligence period performs the same function as the option period. More rare, is a straight transaction where the developer purchases the land with little time to perform adequate due diligence to assess the development potential or possible constraints of a property.

Stage two is the option or due diligence period. Before a developer purchases the land, many expensive and time consuming activities take place such as environmental studies, engineering, appraisal, architectural designs, title reports, negotiations with builders and contractors, arrangement of financing and obtainment of entitlements. These activities take place before purchase of the land to reduce the risk to the developer. Examination of all potential hazards and of discovery of development potential needs to occur in order to determine if the land price is justifiable. Significant hazards include contamination of the site, liens against the title of the property, and problems obtaining entitlements. In addition to contamination and entitlements being expensive to navigate, they also pose a significant time risk. Carrying costs of land are significant, but more importantly are ever changing market conditions. Both the remediation and entitlement process can delay a project creating greater uncertainty of market conditions when the project begins selling units.

Stage three consists of purchasing the land, finalization of financing and entitlements, and beginning project construction. Construction typically begins with utilities and off-site improvements then progresses to onsite and vertical construction. Upon completion of stage three, stage four is the implementation of a marketing

campaign culminating in the sale and or lease of the project. In addition, stage four covers the creation of facility management or a homeowner association.

Components of a Feasibility Analysis

I chose Sacramento because it is a large city with a vibrant downtown, but the city has not reached the critical mass of large cities where rents are achievable that make infill development feasibility much easier. Therefore, this study will be applicable to many regions across the country. In addition, I have working knowledge of the development industry in Sacramento, so I am familiar with lease rates, sales prices, and construction costs. This knowledge helps ensure accuracy of the analysis.

The first section of the feasibility study introduces the reader to the Sacramento housing market. A component of the housing market section lists current product on the market. While the basis for the initial price offering is income of the region, not recent sales, an accurate assessment of what is currently for sale and recently sold is necessary. I will arrive at a price per unit that is feasible for this market by applying conventional lending practices, income-to-debt service ratios, to an average annual household income of each income segment above $70,000 for downtown Sacramento. Calculation of a condominium price using household income segments below $70,000 yields prices that do not cover the cost of construction. This method will provide a more accurate assessment of initial market price of units in contrast to using past sales of comparable condominium projects. We are currently emerging from a recession and a period of unsustainable lending practices. Transaction prices of the past few years are not achievable now, so pricing units on past comparable sales is the wrong approach. In

addition, the majority of current sales are distressed sales - foreclosures, developer fire sales, or short sales. This hypothetical project is not feasible under current market conditions, so pricing the units from area income is a reliable way of determining achievable sales prices when the economy rebounds.

After determining price points of the units, I will look at recent land sales as potential development sites because this method will give me an accurate land price to use in the financial model. After choosing a site, I will conduct a project feasibility study based upon the findings of the market analysis and pricing feasibility. The feasibility will analyze costs through the acquisition and construction period, and assumes conventional construction financing that stays in place throughout the absorption period.

Estimates for construction costs are from the fourth quarter 2008 publication of Marshall Valuation Service. Marshall Valuation Services provides estimates of replacement costs for most real estate product types in all 50 states. Adjustments to a base cost, using a multiplier, account for cost discrepancies of different locations. Thus, if the base cost per square foot of an office building is $100 per square foot and the multiplier for the Sacramento market is 1.05, then the cost of an office building per square foot would be $105. The following items are components of the price per square foot figure.

1. Materials and labor, including local, state, and federal sales taxes (Marshal Valuation Services, 2008, section 1, p. 3)

2. Average architects' and engineering fees, which typically include plan check, nominal building permits, and surveying to establish building lines and grades (MVS, 2008, Section 1 p 3).

3. Normal site preparation (MVS, 2008, section 1, p. 3).

4. Utilities from structure to lot line (MVS, 2008, section 1, p. 3).

5. Contractors' overhead and profit (MVS, 2008, section 1, p. 3).

Items not included in the cost per square foot are:

1. "Costs of buying and assembling land such as escrow fees, legal fees, property taxes, right of way costs, demolition, storm drains or rough grading" (MVS, 2008, section 1, p. 3).

2. Pilings or hillside foundations (MVS, 2008, section 1, p. 3).

3. Costs of land planning, developer overhead and profit, interest and property taxes on the land, feasibility studies, environmental impact reports, environmental testing, appraisal and consulting fees (MVS, 2008, section 1, p. 3).

4. Costs of "…negative cash-flow during development, project bond issues, permanent financing, developmental overhead and equipment purchases (MVS, 2008, section 1, p. 3).

5. Landscaping and recreational facilities such as pools and gyms (MVS, 2008, section 1, p. 3).

6. Off-site costs and municipal development impact fees (MVS, 2008, section 1, p. 3).

7. Furnishings and fixtures (MVS, 2008, section 1, p. 3).

A limitation of using the Marshal Valuation Service is that the copy available to me is approximately eighteen months old at the time of this study. Construction costs have dramatically fluctuated over the past three years because of the downturn in the economy. Construction costs have decreased substantially. While not having the most current data is a limitation, it may prove more accurate for long-term applications because as the market normalizes construction costs will rise to levels experienced during periods of economic growth.

Once I estimate construction costs, I calculate the loan amount by applying a loan-to-value (LTV) ratio to the sum of the land price and construction costs. This product is important as it determines both the loan amount and the equity requirement. Knowing the loan amount allows for the calculation of financing costs. The equity requirement is necessary during the financial analysis to determine the internal rate of return (IRR) and the net present value (NPV) of the project.

Internal rate of return is “a way of measuring a return on investment, expressed as a (annual) compound rate of interest, over the entire investment period” (Brueggeman and Fisher, 2008, p. 65). The IRR allows an investor to compare two separate

investments no matter how much future cash flows differ. For example, suppose an investment will cost $100 and this investment will yield three annual payments of $50. This yields an IRR of 23.375%. Suppose another investment also costs $100 but instead of three annual payments of $50, there is a lump sum of $150 at the end of the same three-year term. Which investment is prudent to choose as both investments payout the same aggregate number? The second investment yields an IRR of 14.47 percent. This example illustrates the point of how an IRR calculation is helpful when deciding between two series of cash flows.

Similarly, net present value is a method for evaluating cash flows from an investment. Net present value accounts for both cash inflows and outflows, and the rate of return requirement of the developer. By discounting cash flows at a rate of return requirement, the investor can determine whether to accept an investment based upon a positive or negative NPV. A negative NPV does not mean the investment loses money, it simply means the investment does not yield the required amount of money. For example, suppose an investor requires a rate of return of fifteen percent. For the two investments used to illustrate IRR above, the investment that had an IRR of 14.47% would have a negative dollar amount in the net present value calculation even though the investment yields a positive return to the investor. The relationship between IRR and NPV is the NVP equals zero when the IRR is equal to the required rate of return.

There are many possibilities for modeling the financing of a development project, but because of the small size of this project, I will model a construction loan that carries through to the sale of units. A construction loan will suffice because of the short

absorption time of the units. The other option is for permanent financing to replace the construction loan at the end of the development period. Assuming the financing structure is only a construction loan, the developer and lender determine a draw schedule, where dispersal of funds corresponds to completion of work on the project. The draw schedule method limits the risk of default to the lender. If the developer does default, the majority of funds lent should have gone to direct improvements to the parcel. Along with this construction loan is an estimation of repayment schedule. The lender will require repayment as each unit sells and the lender requires this payment to be larger than the unit's pro rata share of the loan amount in order to accelerate the payment schedule.

Finally, all the components of the feasibility study are complete that allow for the calculation of the cash flow analysis. The cash flow analysis accounts for all cash inflows and outflows for each period of the project. Calculation of the project IRR and NPV are from this cash flow analysis. Upon completion of the feasibility study, I will apply five policy tools that combat impediments to infill development. I will apply each policy to the baseline feasibility study to determine the amount of change occurring in the project IRR and NPV.

Chapter 4

ANALYSIS

The analysis section is a case study approach to discover the effectiveness of policy tools to increase feasibility of infill development. It evaluates the feasibility of an infill project in Sacramento, California by underwriting a hypothetical condominium project that complies with both city zoning code and the basic development impact fee schedule. The effectiveness of the policy tools to increase feasibility of the infill project is explored thoroughly: a baseline analysis determines the feasibility of the infill project without the aid of infill promotion programs, while a sensitivity analysis applies the policy tools to the baseline analysis on an individual basis.

Housing Market

Much like the rest of the nation, the residential housing market in Sacramento is soft because of high unemployment, high foreclosure activity, and overbuilding. The median home price in June of 2009 was $176,200, which is a 35 percent decrease from the same month the prior year and a 54 percent decrease from when home prices peaked in 2005 at $385,000 (HUD, 2009, p.7). Since 2000, builders have completed 3047 new condominium or townhome units (HUD, 2009, p.7), which equates to 359 units per year. According to the U.S. Department of Housing and Urban Development, “Currently, 520 condominium units are under construction within the city of Sacramento” (HUD, 2009, pp. 7-8). These 520 units per year suggest an oversupply in comparison to levels of construction in the previous nine years. In fact, “During the 12 months ending June 2009, The Gregory Group reports that the average price of a new condominium was

$314,700, reflecting a five percent decrease from the previous 12-month period" (HUD, 2009, p.8). It is important to note that the number of units constructed each year does not reflect the price or number of units absorbed into the market. A five percent decrease in price is substantially lower than the 35 percent reduction in median home price experienced by the region as a whole. Is this lower reduction because of more demand for condominium units or is it possibly that builders are holding the units so as to not take a loss? This discrepancy in price reduction between condominium units and the overall housing market would be an interesting topic for future research.

Table one is a compilation of condominiums currently for sale or have recently sold. The list is from the Multiple Listing Service for the six months prior to March 25, 2010. The vast majority of these condominiums are on market comparables with only three condominiums selling during this period.

An absorption analysis (a survey of existing projects to determine the amount of units the market is selling or absorbing over a given period) is necessary to obtain project financing. I did not complete an absorption analysis for this thesis because of time constraints and limitations of resources. I will use an absorption rate of three units per month, which is an arbitrary number with no justification. In addition, the task of completing a market survey under current poor economic conditions will yield an absorption rate too low to support a feasible project. The absorption rate has a significant effect on the feasibility of the project because it affects the pay down rate of the construction loan and cash inflow to the developer. As the period to pay down the debt

increases, the financing expense also increases. In addition, an increase in the period between a developers initial cash outlay and cash inflows results in a lower rate of return.

Project

Site – The site of this hypothetical project consists of four parcels on the corner of 19th Street and Q Street in a part of Sacramento known as Midtown. The site is 36,590 square feet or .84 acres. These parcels have recently been part of two separate transactions in which the City of Sacramento was the purchaser. The first transaction took place on January 11, 2008 and was for a parcel identified as "Bermuda Triangle," which is 23,980 square feet (.55 acres) and sold for $1,050,000 or $43.79 per square foot. The second transaction took place on May 28, 2009 and was for three parcels totaling 12,537 square feet (.29 acres), which sold for $725,000 or $57.83 per square foot. The weighted average sale price for the two transactions is $48.51 per square foot. I round this figure up to $50 per square foot to arrive at a land acquisition price for the analysis of $1,829,500. A small parcel is located on the corner; the City owned this parcel prior to these two transactions. In reality, this parcel would be crucial to the development; however, for the purpose of this study it will be fine to omit the parcel from the project. I am omitting this parcel because it was not part of the transactions. The intention of using actual sales transactions is to arrive at an accurate price for the land in the cash flow analysis and to have physical characteristics of the immediate area to analyze.

Zoning – The site is zoned Residential Mixed Use (RMX). Chapter 17.28.010 of the City's municipal code identifies the purpose of this zoning designation: "The RMX zone allows a mix of moderate density residential and neighborhood-serving commercial

uses as a matter of right, and is intended to preserve existing housing stock and the residential character of neighborhoods while encouraging the development of new housing opportunities, as well as neighborhood-oriented ground-floor retail and service uses. Residential densities are the same as that of the R-3A zone, while the types of commercial uses permitted are generally similar to that of the C-1 zone."

R-3A—Multi-Family Zone. The R-3A zone is a multi-family residential zone located in the central city and certain areas adjacent thereto. It is designed to provide development regulations that are consistent with goals for various residential areas in the central city. Minimum land area per unit is 1,200 square feet and maximum density for the R-3A zone is 36 dwelling units per acre.

C-1—Limited Commercial Zone. The C-1 zone is a limited commercial zone, which allows certain office, retail stores, and commercial service establishments that are compatible with residential developments. City Planners intend for this zone to be applicable to small parcels in the middle of existing residential neighborhood. Any nonresidential development in the C-1 zone that requires a discretionary entitlement shall also be subject to review for consistency with the commercial corridor design principles.

Description of the project – Zoning of the property allows for 36 dwelling units per acre and commercial uses on the ground floor. Constructing the maximum allowable units and commercial space reduces the price per buildable square foot of the land cost to its lowest possible number, thus realizing economies of scale. However, maximization of commercial space is not ideal for this project as the site is within a half mile of a new retail center. The new center has an anchor tenant, so competing with this project for

tenants will be difficult. Since the site is .84 acres, the project will consist of 30 residential units, the maximum number of units allowable, and 10,000 square feet of retail. The first floor will be comprised of commercial uses and entry facilities for the condominium residents. Floors two through four will be residential units as well as a multi-story parking garage that will allow residents to park on the floor they live, thus making it easier to reach their unit. Building less than five floors will allow the frame of the structure to be wood, which is much cheaper than steel frame construction.

Underwriting

Condominium Price Discovery – To find an entry price for the condominiums, a conventional method is to survey new condominium units sold over the past 18 to 24 months in order to arrive at an average price per square foot that is currently trading on the market. Due to unsustainable lending practices that occurred during the market bubble from 2000 through 2006, past sales prices might be unreliable for estimating future prices. For this study, I examine household income averages for downtown residents and arrive at a price for the condominiums based upon what the resident population can afford to pay. In using this method, there are choices to make regarding which portion of the population to use. The population residing downtown makes up only a fraction of the population for the region. In addition, the income segments of the region have a higher household income than those of the downtown area. Using the income figures of the greater population would yield the potential for higher condominium prices. I chose the income figures for the downtown population because the lifestyle of downtown living is unique from that of the surrounding community. I

believe these figures would be more representative of potential condominium buyers than the larger region.

Table 23 illustrates the analysis to determine what the downtown population of Sacramento can afford. Moving from left to right on the chart, the first four columns show the population and household income demographics of downtown Sacramento. Column 1 is the low end of the income range and Column 2 is the high end. Column 3 is the population count of each income segment and column four is the corresponding percent of population. Column 4 is the maximum permissible rate that debt service to income for a conventional home loan (Brueggeman and Fisher, 2008, p. 225). The housing income ratio expense includes principal, interest, property tax, and insurance on the property. Costs exclusions include Home Owners Association, maintenance, and operating expenses. These expenses fall into another ratio for lenders that calculates a ratio based upon total obligations of the prospective borrower. I did not calculate the total obligations ratio, which includes credit card debt, auto loans, and other debt because the amounts of these debts vary between individuals.

Calculation of the maximum loan amount assumes the borrower obtains a loan with 6 percent interest rate with an amortization period of 30 years. Income used for this calculation is the average of Column one and two for each segment. The final condominium price assumes each purchaser has a down payment of 10 percent. These prices are not the final prices for the condominiums; rather they are a price range of where I want to price the units. Below is a condo-matrix for the project, which provides detailed information on the types, sizes, amount, and prices of units. A majority of the

project consists of smaller units, the reasoning being two-fold. First, the smaller units have a lower unit price and thus will be easier to absorb into the market. Second, the smaller units sell for a high price per square foot, thus increasing profitability. Price per square foot is below that of the comparables listed above, since the intention of this project is to reach a larger percent of the market and increase the absorption of units into the market.

Construction Costs – Table three lists the square footages of each component of the project. These square footages are the basis for calculating construction costs. Table four breaks down the components of the construction costs, which consist of three segments hard costs, operating expenses, and city fees. The majority of hard costs are from 2008 replacement cost estimates from Marshall & Swift Valuation Company. Not included in the Marshall & Swift figures are tenant improvements, off-site improvements, landscaping, environmental, and other such costs. Experience consulting with engineers and developers allow me to approximate these figures. Tenant improvements are only applicable to the commercial segment of the project. The multiplier adjusts the base costs to costs for the Sacramento region. Total hard costs are approximately $6,400,000. Operating expenses consist of promotion and marketing, property taxes, and legal and administration fees. Financing expense is also an operating expense. The financing expense is not on this cost sheet as I am using these cost estimates to calculate the financing expense. Operating expenses total just over $875,000. The third section is city development impact fees. These costs do not include general permitting fees as those are

included in the Marshall & Swift fee schedule. Development impact fees total approximately $584,000.

Financing – Table five is the construction loan schedule. This table calculates projections of interest expense, based on a 9% interest rate and a loan-to-value ratio of 65 percent. A loan-to-value ratio (LTV) is a tool lenders use to minimize risk that requires the borrower to provide equity in the deal, in this case 35 percent equity, which is an industry standard. An LTV minimizes risk in two ways: First, the lender has recourse on the property if the borrower defaults. Thus, if default occurs, the loan should be less than the value of the property and will be recoverable. Second, there is added motivation when the borrower has personal funds at risk. In this case, the value is the purchase price of the land plus the cost of improvements, totaling approximately $10,115,000. Therefore, the borrower will have to provide just over $3,500,000 in equity. This equity amount will purchase the land and the improvement costs for the first two months of the construction finance schedule. This construction finance schedule estimates the construction timeline of the development. The accuracy of the construction timeline is admittedly weak, as the draws do not coincide with specific construction activities. This lack of specificity of the construction activities is because the construction costs are not itemized; rather they are an overall average cost. I assume ten percent of the construction costs occur each month for the first eight months and five percent of construction costs occur over the last four months of the construction schedule.

Construction loans start accruing interest immediately, but repayment does not start until the project begins to generate revenue. The structure of the construction loan is

as follows. The lender dispenses funds in the form of monthly draws that coincide with construction activities. Interest does not occur in the issuance month of each draw, but interest accrues from draws of previous months. This interest accrual is the interest draw. Adding the construction draw for each period and the interest draw for each period equals the total draw for the month. Adding the total draw to the previous period's loan balance equals the new loan balance.

At month 13, the project begins to generate revenue from sales of units and repayment of the loan commences. The loan payment coincides directly to sales of condominium units, thus when a condominium sells the lender requires a release payment in order to release their lien interest in that segment of the property. While payments coincide with project revenue, the lender will calculate a release price in excess of the loan balance per unit so that repayment of the loan occurs before units are sold-out. Calculation of a release payment is simple. First, divide the present value of the construction draws by the present value of the estimated project revenue; this quotient is the base percent of revenue to the lender. Then multiply this quotient by an acceleration rate of 120 percent and then multiply this product by the condominium sale price to arrive at the release price per unit. Base percent of revenue to the lender is 58 percent; accounting for the acceleration factor equals 69 percent of revenue to the lender. Multiplying 69 percent by the average price per unit gives an acceleration release price of $245,410. I use an average price for objectivity reasons because I do not know the order in which the units will sell. Assuming higher priced units sell before lower priced units or visa-versa will skew results. The lender would create an acceleration release price for

individual units as opposed to a general price for all units. In addition, the lender will set a release price per unit as opposed to a percent of sale in case the units sell for a reduced price. The release price does not consider income from the commercial segment of the development.

Retail Component – A discounted cash flow analysis is the analysis of choice for valuing income-producing property. Table 22 is the discounted cash flow analysis for the commercial component. A discounted cash flow analysis evaluates the income and expenses of a real estate asset over a ten-year period that culminates in the sale of that asset at the end of the ten years. Whether or not the intention is to actually sell the property at the end of the ten-year period is irrelevant; the sale price figure (reversion value) is simply a representation of the earning power of the asset for the rest of its usable life. An estimation of income for the asset less operating expenses yields a net operating income. The value of the retail component is the present value of the each annual net operating income and the reversion value.

An estimation of income begins with an annual lease rate of $30 per square foot in year one. This lease rate increases two percent per year. Multiplying the leasable square footage and the annual lease rate in each year produces the potential gross income (PGI). The potential gross income represents the maximum earning potential of the property as it assumes the property has no vacancies throughout the life of the asset. However, because the project will indeed experience vacancy, and because the property is in close proximity to a new retail center, I will use a high vacancy rate of 20 percent. Subtracting the vacancy rate from the PGI yields the effective gross income (EGI). The

estimation of operating expenses is 30 percent of PGI. Subtracting vacancy and operating expenses equals the net operating income (NOI).

A calculation of NOI occurs for eleven years. The next step is to calculate the sale price (reversion value) of the asset in year ten. The NOI for year 11 is necessary for this calculation. Applying a capitalization rate to the NOI of year 11 yields the reversion value of year ten. A cap rate is a ratio that measures the relationship between NOI and the value of a property: value = NOI/cap rate. The lower the cap rate, the greater the market values the earning potential of a property.

Brueggemann and Fisher give three scenarios for estimating a capitalization rate at the end of the ten-year period and they are based upon assumptions of long-term growth. If long-term growth is expected to be positive, the calculation of the terminal cap rate is (r – g) where r equals the discount rate and g equals long-term growth rate. In this case, 12 percent subtract 2 percent equates to a 10 percent terminal cap rate and a reversion value of $2,067,988.

So far, calculations have been for future cash flows of the retail component. To arrive at a value for the retail, conversion of these cash flows to a present value figure is necessary. To arrive at a present value figure, discount annual NOI and the reversion value using a discount rate of 12 percent. Adding the present values of each year's NOI and the reversion value yield a current value for the commercial component of $1,695,000.

Cash Flow Analysis – The culmination of all preceding calculations is the cash flow analysis, Table 7. This work indicates whether the project is feasible. The cash

flow analysis consists of two sections, cash inflow and cash outflow. Cash inflow consists of sales revenue from condominiums, value of the commercial component, and construction and interest draws. Cash outflow consists of the land purchase, additional equity required, closing costs, construction loan fees, construction costs, interest costs, property tax, and condominium sales expense. The structure of the analysis is one-month intervals. Subtracting the monthly outflow from monthly inflow yields net cash flow. Calculation of the internal rate of return (IRR) and net present value (NPV) come from this monthly net cash flow. This project yields an IRR of 12.36 percent and a negative net present value of $150,717. Assuming a developer has a required rate of return is 15 percent this project is not feasible.

Sensitivity Analysis

In order to determine which policy tools are most effective in aiding the implementation of infill development, this section will describe the effects policy tools have on the pro-forma of this hypothetical development. I will analyze the following five policy tools: reducing parking requirements, a cash subsidy, reducing city development impact fees, reducing financing expenses, and providing a soft second loan. I chose these five because they each affect the cash flow analysis in different ways. Understanding how these tools translate to changes in the cash flow analysis will help one be able to predict effectiveness of other tools not mentioned in this analysis.

*Reducing Parking Requirements – (*refer to Tables eight through twelve). Reducing parking requirements is an interesting concept because the change in parking stalls could be the result of a number of different policy options. I reduced the number of

parking spaces from two spaces per unit to one and a half spaces per unit. This reduction of parking stalls could be from a reduction in the parking requirements or from the City paying for the 25 percent of parking spaces lost. It does not matter if the parking spaces are actually there, just whether the developer is paying for them. The 25 percent reduction in parking had a huge effect on the feasibility of the development. The IRR increased from 12.36 percent to 19.09 percent. The NPV increased from -$150,717 to $234,948 making the project very attractive for a developer. The limitation of this analysis is that it assumes there is not reduction in the value the units would command in the market. This tool is effective for three reasons: first, it lowers the overall cost of the project, second, it reduces the amount borrowed translating to a lower interest expense, and finally, it reduces the initial cash outflow for the developer.

Cash Subsidy – (refer to Table 21). A cash subsidy provides the most flexibility for the developer. The assumption is that the City will have $500,000 available to contribute to the project, which the developer does not pay back. This subsidy dramatically increased the feasibility of the project. The IRR increased from 12.36 percent to 21.51 percent. The NPV increased from -$150,717 to $343,468. This tool is very effective because it lowers the initial cash outflow.

Soft Second Loan – (refer to Table 20). A second soft loan, issued by the City, takes a second position behind the construction loan in terms of recourse in the event of foreclosure. The City has the ability to loan at a rate that is below market. In this scenario, the loan is $500,000 and commands a 5 percent interest rate. This subsidy has a marginal effect on the feasibility analysis. The IRR increased from 12.36 percent to

13.59 percent and the NPV increased to $-68,619. This subsidy did not affect the project enough to make it feasible as the return to the developer is still below 15 percent. This subsidy lowered the initial cash outflow by effectively increasing the loan to value on the property without increasing the risk to the primary lender.

Reduce Development Impact Fees – (refer to Tables 13 through 16). Reducing development impact fees is a significant tool to increase the feasibility of the project. Reducing development impact fees by fifty percent increases the IRR from 12.36 percent to 17.06 percent and the NPV from -$150,717 to $118,193. A reduction in city fees increases the return to the developer by lowering the cost of construction and reducing the financing expense as the developer borrows less. This tool increases the return to the developer enough to make the project feasible.

Reduce Finance Expense – (refer to Tables 17 through 19). A reduction in the financing expense can be the result of a variety of policy tools. Credit enhancements and bond financing reduce the cost of borrowing. The baseline pro-forma has a 9 percent interest rate to finance the construction of the project. The sensitivity analysis for a reduction in the financing expense reduces the interest rate to 8 percent. This reduction in interest rate increases the IRR from 12.36 percent to 13.25 percent. The NPV increases from -$150,717 to -$100,994. This tool does not increase the return to the developer enough to make the development feasible.

Summary

This analysis took a case study approach to discover the effectiveness of policy tools on the implementation of infill development. According to this analysis, the policy

tools were effective in increasing the feasibility of infill development. While these tools are quantifiable in nature, other tools exist that do not affect the bottom line to the developer but do aid in the implementation of infill development. The next section discusses the results in more detail and offers suggestions for future policy options.

Chapter 5

CONCLUSION AND RECOMMENDATION

This chapter identifies the findings of this thesis and discusses how they apply to infill implementation strategies. I also explain how the conclusions differ when using varying assumptions. Finally, I provide a series of policy recommendations.

My analysis confirms that policy tools potentially have a significant impact on the feasibility of infill development. An increase of successful infill projects may be the answer to reduce growth on the periphery, resulting in less traffic congestion and a reduction of loss of open space and natural habitat. Infill development promotes downtown vibrancy, a sense of community, and an efficient use of infrastructure. In addition, infill development encourages the use of alternative modes of transportation, thereby reducing reliance on the automobile and in lowering pollution. In response to the recognition of these benefits, municipalities create infill implementation strategies consisting of policies that promote infill development. The primary finding of this thesis is that policy tools that reduce development costs or reduce the developer's initial cash outlay provide more benefit to improving feasibility of an infill project than do tools that reduce financing costs throughout the absorption period. Up front policy tools provide a larger dollar benefit to developers. Nevertheless, the majority of literature focuses on the difficulty of obtaining private sector financing as an impediment to infill development. Perhaps my most surprising finding pertains to parking requirements. I found that reducing the parking requirement by 25 percent substantially increases the feasibility of a project. Assuming the reduction is not drastic enough to reduce the value of the

condominium unit, the parking reduction tool is significant because it is essentially a free subsidy.

What do these findings mean for infill implementation policy? The primary implication is that municipalities need to scour their building, zoning, and regulations code for other possible reductions of unnecessary requirements. No single requirement may be as effective in increasing feasibility as reducing parking requirements; however, the cumulative effect of a series of reductions may be significant. Second, if a municipality truly desires to promote infill development, it needs to allocate funds to pay for grants and impact fees. The benefit of creating the programs is the city sends a message to the development community that the city is serious about helping developers, which will cause these developers to seek out projects in this community. The final implication is that infill implementation policy should consist of a variety of policy tools. The cumulative effect of multiple policy tools will ease uncertainty and provide a cushion if absorption time of units increases.

Caveats and Alternate Assumptions

I made a number of assumptions in the feasibility analysis that may be controversial. I will now consider how my conclusions might differ with varying assumptions. In the feasibility analysis, I discuss the importance of establishing an accurate absorption rate. To illustrate how crucial the absorption rate is, I ran an alternate feasibility analysis that decreases the absorption rate from three units per month to two. This change increases the absorption time by only five months, but has a dramatic affect on the internal rate of return. The original baseline analysis has an internal rate of return

of 12.37 percent and decreasing the absorption rate decreases this number to 8.85 percent. The reduction in absorption rate has this significant effect for two reasons. First, the absorption rate reduction reduces incoming cash flow during the beginning stages of the sales period. Second, the absorption rate reduction increases the number of months to complete the sales of the units, therefore pushing incoming cash flows further into the future. This longer timeline increases financing expense and reduces the incoming cash flow due to the time value of money.

An interesting result of increasing the absorption timeline is that the upfront subsidies increase the internal rate of return by a lower amount and the finance reduction tool increases the internal rate of return by a larger amount. This relationship makes sense because with a longer timeline, both the financing expense and the savings from the reduction in the interest rate would be greater. The upfront subsidies have a smaller increase because the calculation of the return is over a longer period. An analogy to explain better why upfront subsidies have less impact over longer periods is the calculation of a return of a stock. Suppose you purchase a stock for $10. The stock increases to $11 in the first year, which is a 10 percent gain for your portfolio. Happy with your return you decide to keep the stock and at the end of the second year the price is still $11. Your portfolio is still 10 percent larger than it was two years ago, but your annual percentage rate is 4.88 percent. Similar to the stock example, the project still produces the same dollar amount of revenue, but because cash inflows occur at further points in the future the return declines.

Changes of other assumptions during the underwriting process may also have a significant effect on the effectiveness of the policy tools. Project size and construction cost per unit will change how effective the upfront subsidies are. A larger project will need a larger monetary subsidy because the subsidy is a smaller percentage of the project costs. If this project were to increase from thirty units to sixty units, even assuming the absorption timeline did not change, the $500,000 grant would be less effective in increasing the internal rate of return. Similarly, if the project were a luxury condominium project the construction cost per square foot would increase because of the use of higher-grade materials. This higher construction cost reduces the effectiveness of the upfront subsidies because the subsidy is a smaller percent of the whole. The increase in costs of this scenario would have the opposite effect on the effectiveness of the reduction of interest rate. The higher cost per unit would increase the financing cost, which increases the value of the reduction of the interest rate, thereby causing an increase of the internal rate of return. These relationships suggest that a municipality should prepare a variety of policies to promote infill development. A variety of policies enables the municipality to react to changing market conditions and apply the appropriate tools at the appropriate time.

Conclusion

Different assumptions may alter conclusions about how specific policy tools affect the feasibility of infill development. Yet regardless of how the assumptions change, one thing is clear: use of policy tools is an effective way to increase the probability that infill development occurs in any given area. This thesis points the way

toward a better understanding of the effectiveness of individual policies on development feasibility and provides a basis for comparing and contrasting those policies.

APPENDIX

Feasibility Analysis Tables

Table 1 - On Market and Recently Sold Condominiums

On Market and Recently Sold Condominiums							
Address	SF	Bed	Bath	Year built	Price	Price per SF	Type
1818 L St.	676	1	1	2008	$ 315,000	$ 466	On Market
1725 14th Street	840	1	1	Unknown	$ 338,000	$ 402	On Market/Short Sale
1622 Q Street	1699	2	2	2004	$ 399,000	$ 235	On Market/Short Sale
1818 L St. # 508	942	1	1	2008	$ 439,000	$ 466	On Market
1813 Capitol Ave # 1	1220	1	2	Under Construction	$ 549,000	$ 450	On Market
1813 Capitol Ave # 3	1281	1	2	Under Construction	$ 599,000	$ 468	On Market
1818 L St # 613	1241	1	2	2008	$ 658,000	$ 530	On Market
1813 Capitol Ave #2	1671	2	2	Under Construction	$ 799,000	$ 478	On Market
1813 Capitol Ave #4	1671	2	2	Under Construction	$ 849,000	$ 508	On Market
1818 L Street#7	1945	3	2	2008	$ 995,000	$ 512	On Market
1818 L Street #811	2043	2	2	2008	$ 1,190,000	$ 582	On Market
1621 10th Street # 2	320	1	1	1984	$ 103,900	$ 325	On Market
1632 11th St # 1	586	1	1	1984	$ 144,900	$ 247	On Market
500 N St #201	845	1	1	1981	$ 214,999	$ 254	On Market
500 N St #1204	1261	2	2	1981	$ 245,000	$ 194	On Market/Short Sale
2025 S St. #201	1335	2	2	2007	$ 419,950	$ 315	On Market
500 N St #1401	1683	3	2	1981	$ 679,000	$ 403	On Market
500 N St #1501	1683	3	2	1981	$ 689,000	$ 409	On Market
1127 15th St #106	1359	2	2	2008	$ 1,200,000	$ 883	On Market
1327 W Sutter Walk	1119	2	2	2008	$ 350,000	$ 313	On Market
1008 P St. #3	730	2	1	1984	$ 182,500	$ 250	Sale Pending
954 Q St.	1013	2	2	1982	$ 263,000	$ 260	Sold - 3/2/2010
1818 L St # 808	1044	1	1	2008	$ 695,000	$ 666	Sold - 10/30/2009
1725 14th st#210	1002	1	2	2009	$ 379,000	$ 378	Sold - 11/3/2009

Table 2 - Unit Mix

Unit Mix					
Unit	Square Footage	Parking Spaces	Number of Units	Price Per Unit	Price per SF
1bd/2ba	800	2	9	$ 300,000	$ 375
2bd/2ba	1,000	2	9	$ 350,000	$ 350
2bd/2ba	1,100	2	6	$ 380,000	$ 345
3bd/2ba	1,300	2	4	$ 420,000	$ 323
3bd/2ba	1,400	2	2	$ 430,000	$ 307
Total	30,800		30	$ 10,670,000	$ 346

Table 3 – Building Square Footage – Baseline Analysis

Building Square Footage				
Building Component	Quantity per Unit	Unit of Measurement	Total	
Residential Units	1027	square feet	30,800	square feet
Balconies	250	square feet	7,500	square feet
Common Area	154	square feet	4,620	square feet
Commercial			10,000	square feet
Parking Spaces	2	spaces per res unit	60	spaces

Table 4 - Construction Costs, Baseline Analysis

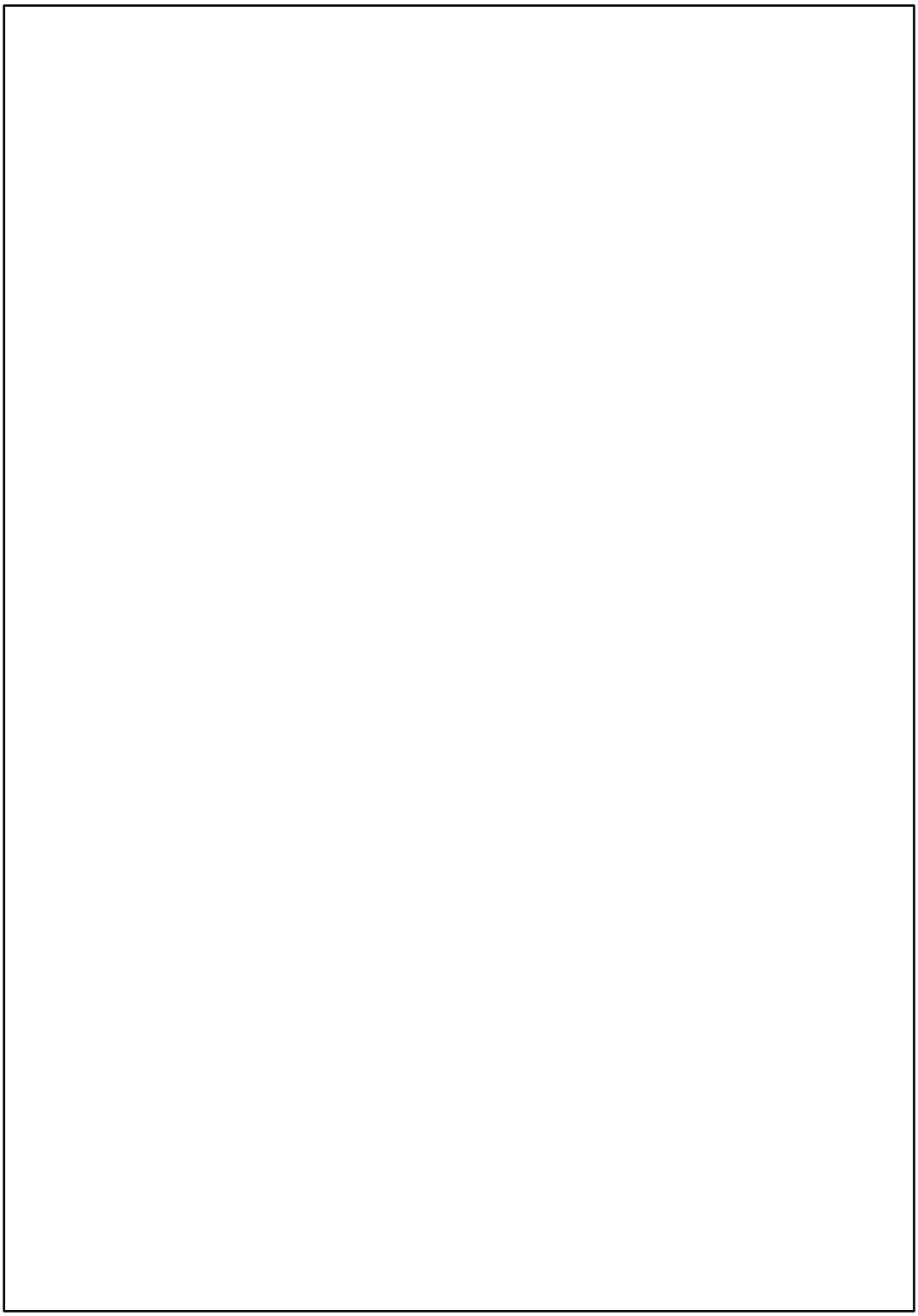

Table 5 - Construction Loan Draw and Payment Schedule, Baseline Analysis

Month	Construction Draw	Interest Draw	Total Draw	Loan Reduction	Ending Balance
Close (0)	$ -	$ -	$ -		$ -
1	$ -	$ -	$ -		$ -
2	$ -	$ -	$ -		$ -
3	$ 774,896.63	$ -	$ 774,896.63		$ 774,896.63
4	$ 828,556.74	$ 5,811.72	$ 834,368.47		$ 1,609,265.10
5	$ 828,556.74	$ 12,069.49	$ 840,626.23		$ 2,449,891.33
6	$ 828,556.74	$ 18,374.18	$ 846,930.93		$ 3,296,822.26
7	$ 828,556.74	$ 24,726.17	$ 853,282.91		$ 4,150,105.17
8	$ 828,556.74	$ 31,125.79	$ 859,682.53		$ 5,009,787.70
9	$ 414,278.37	$ 37,573.41	$ 451,851.78		$ 5,461,639.48
10	$ 414,278.37	$ 40,962.30	$ 455,240.67		$ 5,916,880.15
11	$ 414,278.37	$ 44,376.60	$ 458,654.97		$ 6,375,535.12
12	$ 414,278.37	$ 47,816.51	$ 462,094.89		$ 6,837,630.01
13		$ 51,282.23	$ 51,282.23	$ 740,953.90	$ 6,147,958.33
14		$ 46,109.69	$ 46,109.69	$ 740,953.90	$ 5,453,114.11
15		$ 40,898.36	$ 40,898.36	$ 740,953.90	$ 4,753,058.56
16		$ 35,647.94	$ 35,647.94	$ 740,953.90	$ 4,047,752.60
17		$ 30,358.14	$ 30,358.14	$ 740,953.90	$ 3,337,156.84
18		$ 25,028.68	$ 25,028.68	$ 740,953.90	$ 2,621,231.61
19		$ 19,659.24	$ 19,659.24	$ 740,953.90	$ 1,899,936.94
20		$ 14,249.53	$ 14,249.53	$ 740,953.90	$ 1,173,232.57
21		$ 8,799.24	$ 8,799.24	$ 740,953.90	$ 441,077.90
22		$ 3,308.08	$ 3,308.08	$ 444,385.99	$ -
Total	$ 6,574,793.84	$ 538,177.29	$ 7,112,971.13	$ 7,112,971.13	
	Interest Rate	9%			

Table 6 - Construction Loan Payment Calculation, Baseline Analysis

Month	Construction Draw	Construction Draw PV	Sales Revenue	Sales Revenue PV
0		$ -		
1	$ -	$ -		
2	$ -	$ -		
3	$ 774,896.63	$ 757,719.75		
4	$ 828,556.74	$ 804,159.20		
5	$ 828,556.74	$ 798,172.91		
6	$ 828,556.74	$ 792,231.17		
7	$ 828,556.74	$ 786,333.67		
8	$ 828,556.74	$ 780,480.07		
9	$ 414,278.37	$ 387,335.02		
10	$ 414,278.37	$ 384,451.64		
11	$ 414,278.37	$ 381,589.71		
12	$ 414,278.37	$ 378,749.09		
13			$ 1,067,000.00	$ 968,230.38
14			$ 1,067,000.00	$ 961,022.71
15			$ 1,067,000.00	$ 953,868.70
16			$ 1,067,000.00	$ 946,767.94
17			$ 1,067,000.00	$ 939,720.04
18			$ 1,067,000.00	$ 932,724.60
19			$ 1,067,000.00	$ 925,781.24
20			$ 1,067,000.00	$ 918,889.57
21			$ 1,067,000.00	$ 912,049.20
22			$ 2,762,000.00	$ 2,343,324.69
9%	Discount Rate	$ 6,251,222.24		$ 10,802,379.08
Percent of revenue to lender		58%		
Accelerated payment		69%		

Table 7 – Cash Flow Analysis, Baseline Analysis

Developer Cash Flow	Close (0)	Month 1	Month 2	Month 3
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ -	$ -	$ -	$ 774,896.63
Interest Draw	$ -	$ -	$ -	$ -
Total Inflow	$ -	$ -	$ -	$ 774,896.63
Outflow				
Land Purchase	$ 1,829,500.00			
Additional Equity		$ 828,556.74	$ 828,556.74	$ 53,660.12
Closing Costs	$ 100,000.00			
Loan Fees	$ 213,389.13			
Direct Costs		$ -	$ -	$ 774,896.63
Principal Reduction				
Interest Cost		$ -	$ -	$ -
Property Tax	$ 22,868.75			
Sales Expense	$ -	$ -	$ -	$ -
Total Outflow	$ 2,165,757.88	$ 828,556.74	$ 828,556.74	$ 828,556.74
Net Cash flow	$ (2,165,757.88)	$ (828,556.74)	$ (828,556.74)	$ (53,660.12)
Internal Rate of Return	12.363%			
Net Present Value	($150,717.02)	15% required rate of return		

Table 7 Continued – Cash Flow Analysis, Baseline Analysis

Developer Cash Flow	Month 4	Month 5	Month 6	Month 7
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Interest Draw	$ 5,811.72	$ 12,069.49	$ 18,374.18	$ 24,726.17
Total Inflow	$ 834,368.47	$ 840,626.23	$ 846,930.93	$ 853,282.91
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Principal Reduction				
Interest Cost	$ 5,811.72	$ 12,069.49	$ 18,374.18	$ 24,726.17
Property Tax				
Sales Expense				
Total Outflow	$ 834,368.47	$ 840,626.23	$ 846,930.93	$ 853,282.91
Net Cash flow	$ -	$ -	$ -	$ -

Table 7 Continued – Cash Flow Analysis, Baseline Analysis

Developer Cash Flow	Month 8	Month 9	Month 10	Month 11
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Interest Draw	$ 31,125.79	$ 37,573.41	$ 40,962.30	$ 44,376.60
Total Inflow	$ 859,682.53	$ 451,851.78	$ 455,240.67	$ 458,654.97
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Principal Reduction				
Interest Cost	$ 31,125.79	$ 37,573.41	$ 40,962.30	$ 44,376.60
Property Tax				
Sales Expense				
Total Outflow	$ 859,682.53	$ 451,851.78	$ 455,240.67	$ 458,654.97
Net Cash flow	$ -	$ -	$ -	$ -

Table 7 Continued - Cash Flow Analysis, Baseline Analysis

Developer Cash Flow	Month 12	Month 13	Month 14	Month 15
Inflow				
Sales		3	3	3
Sales Revenue		$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw	$ 414,278.37			
Interest Draw	$ 47,816.51	$ 51,282.23	$ 46,109.69	$ 40,898.36
Total Inflow	$ 462,094.89	$ 1,118,282.23	$ 1,113,109.69	$ 1,107,898.36
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 414,278.37			
Principal Reduction		$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 47,816.51	$ 51,282.23	$ 46,109.69	$ 40,898.36
Property Tax		$ 22,868.75		
Sales Expense		$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 462,094.89	$ 868,454.88	$ 840,413.59	$ 835,202.26
Net Cash flow	$ -	$ 249,827.35	$ 272,696.10	$ 272,696.10

Table 7 Continued - Cash Flow Analysis, Baseline Analysis

Developer Cash Flow	Month 16	Month 17	Month 18	Month 19
Inflow				
Sales	3	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw				
Interest Draw	$ 35,647.94	$ 30,358.14	$ 25,028.68	$ 19,659.24
Total Inflow	$ 1,102,647.94	$ 1,097,358.14	$ 1,092,028.68	$ 1,086,659.24
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs				
Principal Reduction	$ 740,953.90	$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 35,647.94	$ 30,358.14	$ 25,028.68	$ 19,659.24
Property Tax				
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 829,951.84	$ 824,662.05	$ 819,332.58	$ 813,963.14
Net Cash flow	$ 272,696.10	$ 272,696.10	$ 272,696.10	$ 272,696.10

Table 7 Continued - Cash Flow Analysis, Baseline Analysis

Developer Cash Flow	Month 20	Month 21	Month 22
Inflow			
Sales	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value			$ 1,695,000.00
Construction Draw			
Interest Draw	$ 14,249.53	$ 8,799.24	$ 3,308.08
Outflow	$ 1,081,249.53	$ 1,075,799.24	$ 2,765,308.08
Land Purchase			
Additional Equity			
Closing Costs			
Loan Fees			
Direct Costs			
Principal Reduction			
Interest Cost	$ 740,953.90	$ 740,953.90	$ 444,385.99
Property Tax	$ 14,249.53	$ 8,799.24	$ 3,308.08
Sales Expense			
Total Outflow	$ 53,350.00	$ 53,350.00	$ 53,350.00
Net Cash flow	$ 808,553.43	$ 803,103.15	$ 501,044.07

Table 8 - Building Square Footage, Parking Reduction Analysis

Building Square Footage				
Building Components	Quantity Per Unit	Unit of Measurement	Total	
Residential Units	1027	square feet	30,800	square feet
Balconies	250	square feet	7,500	square feet
Common Area	154	of residential units	4,620	square feet
Commercial			10,000	square feet
Parking Spaces	1.5	spaces per res unit	45	spaces

Table 9 - Construction Costs, Parking Reduction Analysis

Hard Costs	Cost	Per Unit	
Verticle Construction	$ 76.37	per square foot	$ 3,468,725.40
Elevators	$ 2.80	per square foot	$ 86,240.00
Balconies	$ 25.00	per square foot	$ 187,500.00
Parking	$ 25,000.00	per parking space	$ 1,125,000.00
Refinements			
Appliances	$ 2,150.00	per unit	$ 64,500.00
Other	$ 5,000.00	per unit	$ 150,000.00
Tenant Improvements	$ 40.00	per SF	$ 731,800.00
Off-Site Improvements	$ 2.50	per square foot (Site)	$ 91,475.00
Landscaping			$ 20,000.00
Environmental/site clean-up			$ 75,000.00
Other			$ 25,000.00
Multiplier	1.20%	of hard costs	$ 6,097,543.28
Contingency	5%	of hard costs	$ 304,877.16
Sub-total - Hard Costs			$ 6,402,420.45
Operating Expenses			
Promotion & Marketing	5%	of Gross Revenue	$ 533,500.00
Property Taxes	1.25%	of land acquisition	$ 22,868.75
Legal & Administration	5%	of Total Hard Costs	$ 320,121.02
Sub-total - Operating Expenses			$ 876,489.77
Development Impact Fees			
Transportation Fee (Residential)	$ 868.95	per unit	$ 26,068.50
Transportation Fee (Commercial)	$ 1.82	per SF	$ 33,296.90
Construction Excise Tax	0.008	of valuation	$ 51,219.36
Fire Department Inspection Fee	$ 0.04	per SF	$ 1,865.61
Park Impact Fees (residential)	$ 1,425.00	per unit	$ 42,750.00
Park Impact Fees (commercial)	$ 0.17	per SF	$ 3,110.15
Regional Sanitation Fees			
SASD	$ 2,000.00	per ESD	$ 60,000.00
SRCSD	$ 2,800.00	per ESD	$ 84,000.00
Residential Construction Tax			
One Bedroom	$ 250.00	per unit	$ 7,500.00
Two Bedroom	$ 315.00	per unit	$ 9,450.00
Three+ Bedroom	$ 385.00	per unit	$ 11,550.00
School Fees			
Residential	$ 2.63	per SF	$ 81,004.00
Commercial	$ 0.47	per SF	$ 4,700.00
Sacramento City Unified Fee			
Residential	$ 2.63	per SF	$ 81,004.00
Commercial	$ 0.47	per SF	$ 8,598.65
Water Development Fee			$ 28,023.00
Contingency	10%	of Fees	$ 50,611.72
Sub-total-City Fees			$ 584,751.89
Total Costs			$ 7,863,662.11

Table 10 - Construction Loan Draw and Payment Schedule, Parking Reduction Analysis

Month	Construction Draw	Interest Draw	Total Draw	Loan Reduction	Ending Balance
Close (0)	$ -	$ -	$ -		$ -
1	$ -	$ -	$ -		$ -
2	$ 9,625.68	$ -	$ 9,625.68		$ 9,625.68
3	$ 786,366.21	$ 72.19	$ 786,438.40		$ 796,064.09
4	$ 786,366.21	$ 5,970.48	$ 792,336.69		$ 1,588,400.78
5	$ 786,366.21	$ 11,913.01	$ 798,279.22		$ 2,386,680.00
6	$ 786,366.21	$ 17,900.10	$ 804,266.31		$ 3,190,946.31
7	$ 786,366.21	$ 23,932.10	$ 810,298.31		$ 4,001,244.62
8	$ 786,366.21	$ 30,009.33	$ 816,375.55		$ 4,817,620.16
9	$ 393,183.11	$ 36,132.15	$ 429,315.26		$ 5,246,935.42
10	$ 393,183.11	$ 39,352.02	$ 432,535.12		$ 5,679,470.54
11	$ 393,183.11	$ 42,596.03	$ 435,779.13		$ 6,115,249.67
12	$ 393,183.11	$ 45,864.37	$ 439,047.48		$ 6,554,297.15
13		$ 49,157.23	$ 49,157.23	$ 710,250.78	$ 5,893,203.60
14		$ 44,199.03	$ 44,199.03	$ 710,250.78	$ 5,227,151.84
15		$ 39,203.64	$ 39,203.64	$ 710,250.78	$ 4,556,104.70
16		$ 34,170.79	$ 34,170.79	$ 710,250.78	$ 3,880,024.70
17		$ 29,100.19	$ 29,100.19	$ 710,250.78	$ 3,198,874.10
18		$ 23,991.56	$ 23,991.56	$ 710,250.78	$ 2,512,614.88
19		$ 18,844.61	$ 18,844.61	$ 710,250.78	$ 1,821,208.70
20		$ 13,659.07	$ 13,659.07	$ 710,250.78	$ 1,124,616.99
21		$ 8,434.63	$ 8,434.63	$ 710,250.78	$ 422,800.83
22		$ 3,171.01	$ 3,171.01	$ 425,971.84	$ -
Total	$ 6,300,555.37	$ 517,673.51	$ 6,818,228.88	$ 6,818,228.88	
	Interest Rate	9%			

Table 11 - Construction Loan Payment Calculation, Parking Reduction Analysis

Month	Construction Draw	Construction Draw PV	Sales Revenue	Sales Revenue PV
0		$ -		
1	$ -	$ -		
2	$ 9,625.68	$ 9,482.91		
3	$ 786,366.21	$ 768,935.09		
4	$ 786,366.21	$ 763,211.01		
5	$ 786,366.21	$ 757,529.54		
6	$ 786,366.21	$ 751,890.36		
7	$ 786,366.21	$ 746,293.16		
8	$ 786,366.21	$ 740,737.63		
9	$ 393,183.11	$ 367,611.73		
10	$ 393,183.11	$ 364,875.16		
11	$ 393,183.11	$ 362,158.97		
12	$ 393,183.11	$ 359,463.00		
13			$ 1,067,000.00	$ 968,230.38
14			$ 1,067,000.00	$ 961,022.71
15			$ 1,067,000.00	$ 953,868.70
16			$ 1,067,000.00	$ 946,767.94
17			$ 1,067,000.00	$ 939,720.04
18			$ 1,067,000.00	$ 932,724.60
19			$ 1,067,000.00	$ 925,781.24
20			$ 1,067,000.00	$ 918,889.57
21			$ 1,067,000.00	$ 912,049.20
22			$ 2,762,000.00	$ 2,343,324.69
9%	Discount Rate	$ 5,992,188.54		$ 10,802,379.08
Percent of revenue to lender		55%		
Accelerated Payment Ratio		67%		

Table 12 - Cash Flow Analysis, Parking Reduction Analysis

Developer Cash Flow	Close (0)	Month 1	Month 2	Month 3
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ -	$ -	$ 9,625.68	$ 786,366.21
Interest Draw	$ -	$ -	$ -	$ 72.19
Total Inflow	$ -	$ -	$ 9,625.68	$ 786,438.40
Outflow				
Land Purchase	$ 1,829,500.00			
Additional Equity		$ 786,366.21	$ 786,366.21	$ (9,625.68)
Closing Costs	$ 100,000.00			
Loan Fees	$ 204,546.87			
Direct Costs		$ -	$ 9,625.68	$ 786,366.21
Principal Reduction				
Interest Cost		$ -	$ -	$ 72.19
Property Tax	$ 22,868.75			
Sales Expense	$ -	$ -	$ -	$ -
Total Outflow	$ 2,156,915.62	$ 786,366.21	$ 795,991.89	$ 776,812.72
Net Cash flow	$ (2,156,915.62)	$ (786,366.21)	$ (786,366.21)	$ 9,625.68
Internal Rate of Return	19.098%			
Net Present Value	$234,948.27	15%	required rate of return	

Table 12 Continued- Cash Flow Analysis, Parking Reduction Analysis

Developer Cash Flow	Month 4	Month 5	Month 6	Month 7
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 786,366.21	$ 786,366.21	$ 786,366.21	$ 786,366.21
Interest Draw	$ 5,970.48	$ 11,913.01	$ 17,900.10	$ 23,932.10
Total Inflow	$ 792,336.69	$ 798,279.22	$ 804,266.31	$ 810,298.31
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 786,366.21	$ 786,366.21	$ 786,366.21	$ 786,366.21
Principal Reduction				
Interest Cost	$ 5,970.48	$ 11,913.01	$ 17,900.10	$ 23,932.10
Property Tax				
Sales Expense				
Total Outflow	$ 792,336.69	$ 798,279.22	$ 804,266.31	$ 810,298.31
Net Cash flow	$ -	$ -	$ -	$ -

Table 12 Continued - Cash Flow Analysis, Parking Reduction Analysis

Developer Cash Flow	Month 8	Month 9	Month 10	Month 11
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 786,366.21	$ 393,183.11	$ 393,183.11	$ 393,183.11
Interest Draw	$ 30,009.33	$ 36,132.15	$ 39,352.02	$ 42,596.03
Total Inflow	$ 816,375.55	$ 429,315.26	$ 432,535.12	$ 435,779.13
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 786,366.21	$ 393,183.11	$ 393,183.11	$ 393,183.11
Principal Reduction				
Interest Cost	$ 30,009.33	$ 36,132.15	$ 39,352.02	$ 42,596.03
Property Tax				
Sales Expense				
Total Outflow	$ 816,375.55	$ 429,315.26	$ 432,535.12	$ 435,779.13
Net Cash flow	$ -	$ -	$ -	$ -

Table 12 Continued - Cash Flow Analysis, Parking Reduction Analysis

Developer Cash Flow	Month 12	Month 13	Month 14	Month 15
Inflow				
Sales		3	3	3
Sales Revenue		$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw	$ 393,183.11			
Interest Draw	$ 45,864.37	$ 49,157.23	$ 44,199.03	$ 39,203.64
Total Inflow	$ 439,047.48	$ 1,116,157.23	$ 1,111,199.03	$ 1,106,203.64
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 393,183.11			
Principal Reduction	$ -	$ 710,250.78	$ 710,250.78	$ 710,250.78
Interest Cost	$ 45,864.37	$ 49,157.23	$ 44,199.03	$ 39,203.64
Property Tax		$ 22,868.75		
Sales Expense		$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 439,047.48	$ 835,626.76	$ 807,799.81	$ 802,804.42
Net Cash flow	$ -	$ 280,530.47	$ 303,399.22	$ 303,399.22

Table 12 Continued - Cash Flow Analysis, Parking Reduction Analysis

Developer Cash Flow	Month 16	Month 17	Month 18	Month 19
Inflow				
Sales	3	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw				
Interest Draw	$ 34,170.79	$ 29,100.19	$ 23,991.56	$ 18,844.61
Total Inflow	$ 1,101,170.79	$ 1,096,100.19	$ 1,090,991.56	$ 1,085,844.61
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs				
Principal Reduction	$ 710,250.78	$ 710,250.78	$ 710,250.78	$ 710,250.78
Interest Cost	$ 34,170.79	$ 29,100.19	$ 23,991.56	$ 18,844.61
Property Tax				
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 797,771.57	$ 792,700.97	$ 787,592.34	$ 782,445.39
Net Cash flow	$ 303,399.22	$ 303,399.22	$ 303,399.22	$ 303,399.22

Table 12 Continued - Cash Flow Analysis, Parking Reduction Analysis

Developer Cash Flow	Month 20	Month 21	Month 22
Inflow			
Sales	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value			$ 1,695,000.00
Construction Draw			
Interest Draw	$ 13,659.07	$ 8,434.63	$ 3,171.01
Total Inflow	$ 1,080,659.07	$ 1,075,434.63	$ 2,765,171.01
Outflow			
Land Purchase			
Additional Equity			
Closing Costs			
Loan Fees			
Direct Costs			
Principal Reduction	$ 710,250.78	$ 710,250.78	$ 425,971.84
Interest Cost	$ 13,659.07	$ 8,434.63	$ 3,171.01
Property Tax			
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 777,259.85	$ 772,035.41	$ 482,492.84
Net Cash flow	$ 303,399.22	$ 303,399.22	$ 2,282,678.16

Table 13 - Construction Cost, Impact Fee Reduction Analysis

Hard Costs	Cost	Per Unit	
Verticle Construction	$ 76.37	per square foot	$ 3,468,725.40
Elevators	$ 2.80	per square foot	$ 86,240.00
Balconies	$ 25.00	per square foot	$ 187,500.00
Parking	$ 25,000.00	per parking space	$ 1,500,000.00
Refinements			
Appliances	$ 2,150.00	per unit	$ 64,500.00
Other	$ 5,000.00	per unit	$ 150,000.00
Tenant Improvements	$ 40.00	per SF	$ 731,800.00
Off-Site Improvements	$ 2.50	per square foot (Site)	$ 91,475.00
Landscaping			$ 20,000.00
Environmental/site clean-up			$ 75,000.00
Other			$ 25,000.00
Multiplier	1.20%	of hard costs	$ 6,477,043.28
Contingency	5%	of hard costs	$ 323,852.16
Sub-total - Hard Costs			$ 6,800,895.45
Operating Expenses			
Promotion & Marketing	5%	of Gross Revenue	$ 533,500.00
Property Taxes	1.25%	of land acquisition	$ 22,868.75
Legal & Administration	5%	of Total Hard Costs	$ 340,044.77
Sub-total - Operating Expenses			$ 896,413.52
Development Impact Fees			
Transportation Fee (Residential)	$ 868.95	per unit	$ 26,068.50
Transportation Fee (Commercial)	$ 1.82	per SF	$ 33,296.90
Construction Excise Tax	0.008	of valuation	$ 54,407.16
Fire Department Inspection Fee	$ 0.04	per SF	$ 1,865.61
Park Impact Fees (residential)	$ 1,425.00	per unit	$ 42,750.00
Park Impact Fees (commercial)	$ 0.17	per SF	$ 3,110.15
Regional Sanitation Fees			
SASD	$ 2,000.00	per ESD	$ 60,000.00
SRCSD	$ 2,800.00	per ESD	$ 84,000.00
Residential Construction Tax			
One Bedroom	$ 250.00	per unit	$ 7,500.00
Two Bedroom	$ 315.00	per unit	$ 9,450.00
Three+ Bedroom	$ 385.00	per unit	$ 11,550.00
School Fees			
Residential	$ 2.63	per SF	$ 81,004.00
Commercial	$ 0.47	per SF	$ 4,700.00
Sacramento City Unified Fee			
Residential	$ 2.63	per SF	$ 81,004.00
Commercial	$ 0.47	per SF	$ 8,598.65
Water Development Fee			$ 28,023.00
Contingency	10%	of Fees	$ 50,930.50
Sub-total-City Fees (multiplied by .5)			$ 294,129.24
Total Costs			$ 7,991,438.21

Table 14 - Construction Payment Calculation, Impact Fee Reduction Analysis

Month	Construction Draw	Construction Draw PV	Sales Revenue	Sales Revenue PV
0		$ -		
1	$ -	$ -		
2	$ -	$ -		
3	$ 789,603.09	$ 772,100.22		
4	$ 799,143.82	$ 775,612.37		
5	$ 799,143.82	$ 769,838.58		
6	$ 799,143.82	$ 764,107.77		
7	$ 799,143.82	$ 758,419.62		
8	$ 799,143.82	$ 752,773.82		
9	$ 399,571.91	$ 373,585.02		
10	$ 399,571.91	$ 370,803.99		
11	$ 399,571.91	$ 368,043.67		
12	$ 399,571.91	$ 365,303.89		
13			$ 1,067,000.00	$ 968,230.38
14			$ 1,067,000.00	$ 961,022.71
15			$ 1,067,000.00	$ 953,868.70
16			$ 1,067,000.00	$ 946,767.94
17			$ 1,067,000.00	$ 939,720.04
18			$ 1,067,000.00	$ 932,724.60
19			$ 1,067,000.00	$ 925,781.24
20			$ 1,067,000.00	$ 918,889.57
21			$ 1,067,000.00	$ 912,049.20
22			$ 2,762,000.00	$ 2,343,324.69
9%	Discount Rate	$ 6,070,588.95		$ 10,802,379.08
Percent of revenue to lender		56%		
Accelerated Payment Ratio		67%		

Table 15 - Construction Loan Draw and Payment Schedule, Impact Fee Reduction Analysis

Month	Construction Draw	Interest Draw	Total Draw	Loan Reduction	Ending Balance
Close (0)	$ -	$ -	$ -		$ -
1	$ -	$ -	$ -		$ -
2	$ -	$ -	$ -		$ -
3	$ 789,603.09	$ -	$ 789,603.09		$ 789,603.09
4	$ 799,143.82	$ 5,922.02	$ 805,065.84		$ 1,594,668.93
5	$ 799,143.82	$ 11,960.02	$ 811,103.84		$ 2,405,772.77
6	$ 799,143.82	$ 18,043.30	$ 817,187.12		$ 3,222,959.89
7	$ 799,143.82	$ 24,172.20	$ 823,316.02		$ 4,046,275.91
8	$ 799,143.82	$ 30,347.07	$ 829,490.89		$ 4,875,766.80
9	$ 399,571.91	$ 36,568.25	$ 436,140.16		$ 5,311,906.96
10	$ 399,571.91	$ 39,839.30	$ 439,411.21		$ 5,751,318.17
11	$ 399,571.91	$ 43,134.89	$ 442,706.80		$ 6,194,024.97
12	$ 399,571.91	$ 46,455.19	$ 446,027.10		$ 6,640,052.07
13		$ 49,800.39	$ 49,800.39	$ 719,543.54	$ 5,970,308.92
14		$ 44,777.32	$ 44,777.32	$ 719,543.54	$ 5,295,542.69
15		$ 39,716.57	$ 39,716.57	$ 719,543.54	$ 4,615,715.72
16		$ 34,617.87	$ 34,617.87	$ 719,543.54	$ 3,930,790.05
17		$ 29,480.93	$ 29,480.93	$ 719,543.54	$ 3,240,727.43
18		$ 24,305.46	$ 24,305.46	$ 719,543.54	$ 2,545,489.35
19		$ 19,091.17	$ 19,091.17	$ 719,543.54	$ 1,845,036.98
20		$ 13,837.78	$ 13,837.78	$ 719,543.54	$ 1,139,331.22
21		$ 8,544.98	$ 8,544.98	$ 719,543.54	$ 428,332.66
22		$ 3,212.49	$ 3,212.49	$ 431,545.16	$ -
Total	$ 6,383,609.83	$ 523,827.18	$ 6,907,437.02	$ 6,907,437.02	
	Interest Rate	9%			

Table 16 - Cash Flow Analysis, Impact Fee Reduction Analysis

Developer Cash Flow	Close (0)	Month 1	Month 2	Month 3
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ -	$ -	$ -	$ 789,603.09
Interest Draw	$ -	$ -	$ -	$ -
Total Inflow	$ -	$ -	$ -	$ 789,603.09
Outflow				
Land Purchase	$ 1,829,500.00			
Additional Equity		$ 799,143.82	$ 799,143.82	$ 9,540.73
Closing Costs	$ 100,000.00			
Loan Fees	$ 207,223.11			
Direct Costs		$ -	$ -	$ 789,603.09
Principal Reduction				
Interest Cost		$ -	$ -	$ -
Property Tax	$ 22,868.75			
Sales Expense	$ -	$ -	$ -	$ -
Total Outflow	$ 2,159,591.86	$ 799,143.82	$ 799,143.82	$ 799,143.82
Net Cash flow	$ (2,159,591.86)	$ (799,143.82)	$ (799,143.82)	$ (9,540.73)
Internal Rate of Return	17.063%			
Net Present Value	$118,193.93		15% required rate of return	

Table 16 Continued - Cash Flow Analysis, Impact Fee Reduction Analysis

Developer Cash Flow	Month 4	Month 5	Month 6	Month 7
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 799,143.82	$ 799,143.82	$ 799,143.82	$ 799,143.82
Interest Draw	$ 5,922.02	$ 11,960.02	$ 18,043.30	$ 24,172.20
Total Inflow	$ 805,065.84	$ 811,103.84	$ 817,187.12	$ 823,316.02
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 799,143.82	$ 799,143.82	$ 799,143.82	$ 799,143.82
Principal Reduction				
Interest Cost	$ 5,922.02	$ 11,960.02	$ 18,043.30	$ 24,172.20
Property Tax				
Sales Expense				
Total Outflow	$ 805,065.84	$ 811,103.84	$ 817,187.12	$ 823,316.02
Net Cash flow	$ -	$ -	$ -	$ -

Table 16 Continued - Cash Flow Analysis, Impact Fee Reduction Analysis

Developer Cash Flow	Month 8	Month 9	Month 10	Month 11
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 799,143.82	$ 399,571.91	$ 399,571.91	$ 399,571.91
Interest Draw	$ 30,347.07	$ 36,568.25	$ 39,839.30	$ 43,134.89
Total Inflow	$ 829,490.89	$ 436,140.16	$ 439,411.21	$ 442,706.80
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 799,143.82	$ 399,571.91	$ 399,571.91	$ 399,571.91
Principal Reduction				
Interest Cost	$ 30,347.07	$ 36,568.25	$ 39,839.30	$ 43,134.89
Property Tax				
Sales Expense				
Total Outflow	$ 829,490.89	$ 436,140.16	$ 439,411.21	$ 442,706.80
Net Cash flow	$ -	$ -	$ -	$ -

Table 16 Continued - Cash Flow Analysis, Impact Fee Reduction Analysis

Developer Cash Flow	Month 12	Month 13	Month 14	Month 15
Inflow				
Sales		3	3	3
Sales Revenue		$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw	$ 399,571.91			
Interest Draw	$ 46,455.19	$ 49,800.39	$ 44,777.32	$ 39,716.57
Total Inflow	$ 446,027.10	$ 1,116,800.39	$ 1,111,777.32	$ 1,106,716.57
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 399,571.91			
Principal Reduction		$ 719,543.54	$ 719,543.54	$ 719,543.54
Interest Cost	$ 46,455.19	$ 49,800.39	$ 44,777.32	$ 39,716.57
Property Tax		$ 22,868.75		
Sales Expense		$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 446,027.10	$ 845,562.68	$ 817,670.86	$ 812,610.11
Net Cash flow	$ -	$ 271,237.71	$ 294,106.46	$ 294,106.46

Table 16 Continued - Cash Flow Analysis, Impact Fee Reduction Analysis

Developer Cash Flow	Month 16	Month 17	Month 18	Month 19
Inflow				
Sales	3	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw				
Interest Draw	$ 34,617.87	$ 29,480.93	$ 24,305.46	$ 19,091.17
Total Inflow	$ 1,101,617.87	$ 1,096,480.93	$ 1,091,305.46	$ 1,086,091.17
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs				
Principal Reduction	$ 719,543.54	$ 719,543.54	$ 719,543.54	$ 719,543.54
Interest Cost	$ 34,617.87	$ 29,480.93	$ 24,305.46	$ 19,091.17
Property Tax				
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 807,511.41	$ 802,374.47	$ 797,199.00	$ 791,984.71
Net Cash flow	$ 294,106.46	$ 294,106.46	$ 294,106.46	$ 294,106.46

Table 16 Continued - Cash Flow Analysis, Impact Fee Reduction Analysis

Developer Cash Flow	Month 20	Month 21	Month 22
Inflow			
Sales	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value			$ 1,695,000.00
Construction Draw			
Interest Draw	$ 13,837.78	$ 8,544.98	$ 3,212.49
Total Inflow	$ 1,080,837.78	$ 1,075,544.98	$ 2,765,212.49
Outflow			
Land Purchase			
Additional Equity			
Closing Costs			
Loan Fees			
Direct Costs			
Principal Reduction	$ 719,543.54	$ 719,543.54	$ 431,545.16
Interest Cost	$ 13,837.78	$ 8,544.98	$ 3,212.49
Property Tax			
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 786,731.32	$ 781,438.52	$ 488,107.65
Net Cash flow	$ 294,106.46	$ 294,106.46	$ 2,277,104.84

Table 17 - Construction Loan Draw and Payment Schedule, Interest Rate Reduction Analysis

Month	Construction Draw	Interest Draw	Total Draw	Loan Reduction	Ending Balance
Close (0)	$ -	$ -	$ -		$ -
1	$ -	$ -	$ -		$ -
2	$ -	$ -	$ -		$ -
3	$ 774,896.63	$ -	$ 774,896.63		$ 774,896.63
4	$ 828,556.74	$ 5,165.98	$ 833,722.72		$ 1,608,619.35
5	$ 828,556.74	$ 10,724.13	$ 839,280.87		$ 2,447,900.22
6	$ 828,556.74	$ 16,319.33	$ 844,876.08		$ 3,292,776.30
7	$ 828,556.74	$ 21,951.84	$ 850,508.59		$ 4,143,284.89
8	$ 828,556.74	$ 27,621.90	$ 856,178.64		$ 4,999,463.53
9	$ 414,278.37	$ 33,329.76	$ 447,608.13		$ 5,447,071.66
10	$ 414,278.37	$ 36,313.81	$ 450,592.18		$ 5,897,663.84
11	$ 414,278.37	$ 39,317.76	$ 453,596.13		$ 6,351,259.97
12	$ 414,278.37	$ 42,341.73	$ 456,620.11		$ 6,807,880.08
13		$ 45,385.87	$ 45,385.87	$ 740,953.90	$ 6,112,312.04
14		$ 40,748.75	$ 40,748.75	$ 740,953.90	$ 5,412,106.89
15		$ 36,080.71	$ 36,080.71	$ 740,953.90	$ 4,707,233.69
16		$ 31,381.56	$ 31,381.56	$ 740,953.90	$ 3,997,661.35
17		$ 26,651.08	$ 26,651.08	$ 740,953.90	$ 3,283,358.52
18		$ 21,889.06	$ 21,889.06	$ 740,953.90	$ 2,564,293.67
19		$ 17,095.29	$ 17,095.29	$ 740,953.90	$ 1,840,435.06
20		$ 12,269.57	$ 12,269.57	$ 740,953.90	$ 1,111,750.72
21		$ 7,411.67	$ 7,411.67	$ 740,953.90	$ 378,208.49
22		$ 2,521.39	$ 2,521.39	$ 380,729.88	$ -
Total	$ 6,574,793.84	$ 474,521.18	$ 7,049,315.02	$ 7,049,315.02	
	Interest Rate	8%			

Table 18 - Construction Loan Payment Calculation, Interest Rate Reduction Analysis

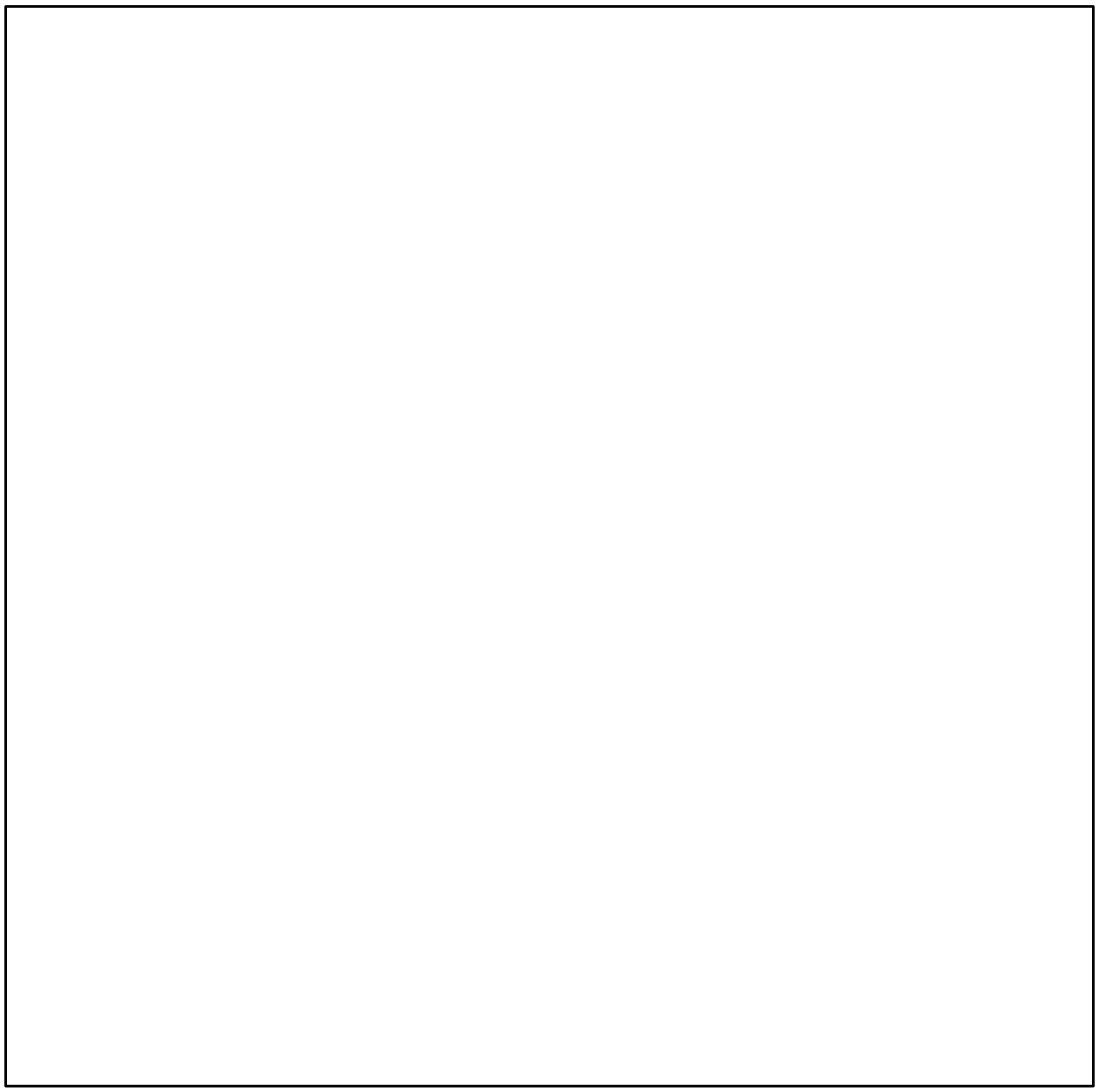

Table 19 - Cash Flow Analysis, Interest Rate Reduction Analysis

Developer Cash Flow	Close (0)	Month 1	Month 2	Month 3
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ -	$ -	$ -	$ 774,896.63
Interest Draw	$ -	$ -	$ -	$ -
Total Inflow	$ -	$ -	$ -	$ 774,896.63
Outflow				
Land Purchase	$ 1,829,500.00			
Additional Equity		$ 828,556.74	$ 828,556.74	$ 53,660.12
Closing Costs	$ 100,000.00			
Loan Fees	$ 211,479.45			
Direct Costs		$ -	$ -	$ 774,896.63
Principal Reduction				
Interest Cost		$ -	$ -	$ -
Property Tax	$ 22,868.75			
Sales Expense	$ -	$ -	$ -	$ -
Total Outflow	$ 2,163,848.20	$ 828,556.74	$ 828,556.74	$ 828,556.74
Net Cash flow	$ (2,163,848.20)	$ (828,556.74)	$ (828,556.74)	$ (53,660.12)
Internal Rate of Return	13.246%			
Net Present Value	($100,994.97)	15%	required rate of return	

Table 19 Continued - Cash Flow Analysis, Interest Rate Reduction Analysis

Developer Cash Flow	Month 4	Month 5	Month 6	Month 7
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Interest Draw	$ 5,165.98	$ 10,724.13	$ 16,319.33	$ 21,951.84
Total Inflow	$ 833,722.72	$ 839,280.87	$ 844,876.08	$ 850,508.59
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Principal Reduction				
Interest Cost	$ 5,165.98	$ 10,724.13	$ 16,319.33	$ 21,951.84
Property Tax				
Sales Expense				
Total Outflow	$ 833,722.72	$ 839,280.87	$ 844,876.08	$ 850,508.59
Net Cash flow	$ -	$ -	$ -	$ -

Table 19 Continued - Cash Flow Analysis, Interest Rate Reduction Analysis

Developer Cash Flow	Month 8	Month 9	Month 10	Month 11
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Interest Draw	$ 27,621.90	$ 33,329.76	$ 36,313.81	$ 39,317.76
Total Inflow	$ 856,178.64	$ 447,608.13	$ 450,592.18	$ 453,596.13
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Principal Reduction				
Interest Cost	$ 27,621.90	$ 33,329.76	$ 36,313.81	$ 39,317.76
Property Tax				
Sales Expense				
Total Outflow	$ 856,178.64	$ 447,608.13	$ 450,592.18	$ 453,596.13
Net Cash flow	$ -	$ -	$ -	$ -

Table 19 Continued - Cash Flow Analysis, Interest Rate Reduction Analysis

Developer Cash Flow	Month 12	Month 13	Month 14	Month 15
Inflow				
Sales		3	3	3
Sales Revenue		$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw	$ 414,278.37			
Interest Draw	$ 42,341.73	$ 45,385.87	$ 40,748.75	$ 36,080.71
Total Inflow	$ 456,620.11	$ 1,112,385.87	$ 1,107,748.75	$ 1,103,080.71
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 414,278.37			
Principal Reduction		$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 42,341.73	$ 45,385.87	$ 40,748.75	$ 36,080.71
Property Tax		$ 22,868.75		
Sales Expense		$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 456,620.11	$ 862,558.52	$ 835,052.65	$ 830,384.62
Net Cash flow	$ -	$ 249,827.35	$ 272,696.10	$ 272,696.10

Table 19 Continued - Cash Flow Analysis, Interest Rate Reduction Analysis

Developer Cash Flow	Month 16	Month 17	Month 18	Month 19
Inflow				
Sales	3	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw				
Interest Draw	$ 31,381.56	$ 26,651.08	$ 21,889.06	$ 17,095.29
Total Inflow	$ 1,098,381.56	$ 1,093,651.08	$ 1,088,889.06	$ 1,084,095.29
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs				
Principal Reduction	$ 740,953.90	$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 31,381.56	$ 26,651.08	$ 21,889.06	$ 17,095.29
Property Tax				
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 825,685.46	$ 820,954.98	$ 816,192.96	$ 811,399.20
Net Cash flow	$ 272,696.10	$ 272,696.10	$ 272,696.10	$ 272,696.10

Table 19 Continued - Cash Flow Analysis, Interest Rate Reduction Analysis

Developer Cash Flow	Month 20	Month 21	Month 22
Inflow			
Sales	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value			$ 1,695,000.00
Construction Draw			
Interest Draw	$ 12,269.57	$ 7,411.67	$ 2,521.39
Total Inflow	$ 1,079,269.57	$ 1,074,411.67	$ 2,764,521.39
Outflow			
Land Purchase			
Additional Equity			
Closing Costs			
Loan Fees			
Direct Costs			
Principal Reduction	$ 740,953.90	$ 740,953.90	$ 380,729.88
Interest Cost	$ 12,269.57	$ 7,411.67	$ 2,521.39
Property Tax			
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 806,573.47	$ 801,715.58	$ 436,601.27
Net Cash flow	$ 272,696.10	$ 272,696.10	$ 2,327,920.12

Table 20 - Cash Flow Analysis, Soft Second Loan

Developer Cash Flow	Close (0)	Month 1	Month 2	Month 3
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ -	$ -	$ -	$ 774,896.63
Interest Draw	$ -	$ -	$ -	$ -
Second Loan	$ 500,000.00			
Total Inflow	$ 500,000.00	$ -	$ -	$ 774,896.63
Outflow				
Land Purchase	$ 1,829,500.00			
Additional Equity		$ 828,556.74	$ 828,556.74	$ 53,660.12
Closing Costs	$ 100,000.00			
Loan Fees	$ 213,389.13			
Direct Costs		$ -	$ -	$ 774,896.63
Principal Reduction				
Interest Cost		$ -	$ -	$ -
Property Tax	$ 22,868.75			
Second Loan Rpmt				
Sales Expense	$ -	$ -	$ -	$ -
Total Outflow	$ 2,165,757.88	$ 828,556.74	$ 828,556.74	$ 828,556.74
Net Cash flow	$ (1,665,757.88)	$ (828,556.74)	$ (828,556.74)	$ (53,660.12)
Internal Rate of Return	13.599%			
Net Present Value	($68,619.27)	15% required rate of return		

Table 20 Continued - Cash Flow Analysis, Soft Second Loan Analysis

Developer Cash Flow	Month 4	Month 5	Month 6	Month 7
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Interest Draw	$ 5,811.72	$ 12,069.49	$ 18,374.18	$ 24,726.17
Second Loan				
Total Inflow	$ 834,368.47	$ 840,626.23	$ 846,930.93	$ 853,282.91
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Principal Reduction				
Interest Cost	$ 5,811.72	$ 12,069.49	$ 18,374.18	$ 24,726.17
Property Tax				
Second Loan Rpmt				
Sales Expense				
Total Outflow	$ 834,368.47	$ 840,626.23	$ 846,930.93	$ 853,282.91
Net Cash flow	$ -	$ -	$ -	$ -

Table 20 Continued - Cash Flow Analysis, Soft Second Loan Analysis

Developer Cash Flow	Month 8	Month 9	Month 10	Month 11
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Interest Draw	$ 31,125.79	$ 37,573.41	$ 40,962.30	$ 44,376.60
Second Loan				
Total Inflow	$ 859,682.53	$ 451,851.78	$ 455,240.67	$ 458,654.97
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Principal Reduction				
Interest Cost	$ 31,125.79	$ 37,573.41	$ 40,962.30	$ 44,376.60
Property Tax				
Second Loan Rpmt				
Sales Expense				
Total Outflow	$ 859,682.53	$ 451,851.78	$ 455,240.67	$ 458,654.97
Net Cash flow	$ -	$ -	$ -	$ -

Table 20 Continued - Cash Flow Analysis, Soft Second Loan Analysis

Developer Cash Flow	Month 12	Month 13	Month 14	Month 15
Inflow				
Sales		3	3	3
Sales Revenue		$1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw	$ 414,278.37			
Interest Draw	$ 47,816.51	$ 51,282.23	$ 46,109.69	$ 40,898.36
Second Loan				
Total Inflow	$ 462,094.89	$1,118,282.23	$ 1,113,109.69	$ 1,107,898.36
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 414,278.37			
Principal Reduction		$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 47,816.51	$ 51,282.23	$ 46,109.69	$ 40,898.36
Property Tax		$ 22,868.75		
Second Loan Rpmt				
Sales Expense		$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 462,094.89	$ 868,454.88	$ 840,413.59	$ 835,202.26
Net Cash flow	$ -	$ 249,827.35	$ 272,696.10	$ 272,696.10

Table 20 Continued - Cash Flow Analysis, Soft Second Loan Analysis

Developer Cash Flow	Month 16	Month 17	Month 18	Month 19
Inflow				
Sales	3	3	3	3
Sales Revenue	$ 1,067,000.00	$1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw				
Interest Draw	$ 35,647.94	$ 30,358.14	$ 25,028.68	$ 19,659.24
Second Loan				
Total Inflow	$ 1,102,647.94	$1,097,358.14	$ 1,092,028.68	$ 1,086,659.24
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs				
Principal Reduction	$ 740,953.90	$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 35,647.94	$ 30,358.14	$ 25,028.68	$ 19,659.24
Property Tax				
Second Loan Rpmt				
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 829,951.84	$ 824,662.05	$ 819,332.58	$ 813,963.14
Net Cash flow	$ 272,696.10	$ 272,696.10	$ 272,696.10	$ 272,696.10

Table 20 Continued - Cash Flow Analysis, Soft Second Loan Analysis

Developer Cash Flow	Month 20	Month 21	Month 22
Inflow			
Sales	3	3	3
Sales Revenue	$ 1,067,000.00	$1,067,000.00	$ 1,067,000.00
Commercial Value			$ 1,695,000.00
Construction Draw			
Interest Draw	$ 14,249.53	$ 8,799.24	$ 3,308.08
Second Loan			
Total Inflow	$ 1,081,249.53	$1,075,799.24	$ 2,765,308.08
Outflow			
Land Purchase			
Additional Equity			
Closing Costs			
Loan Fees			
Direct Costs			
Principal Reduction	$ 740,953.90	$ 740,953.90	$ 444,385.99
Interest Cost	$ 14,249.53	$ 8,799.24	$ 3,308.08
Property Tax			
Second Loan Rpmt			$ 547,895.36
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 808,553.43	$ 803,103.15	$ 1,048,939.43
Net Cash flow	$ 272,696.10	$ 272,696.10	$ 1,716,368.65

Table 21 - Cash Flow Analysis, Cash Subsidy Analysis

Developer Cash Flow	Close (0)	Month 1	Month 2	Month 3
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ -	$ -	$ -	$ 774,896.63
Interest Draw	$ -	$ -	$ -	$ -
Subsidy	$ 500,000.00			
Total Inflow	$ 500,000.00	$ -	$ -	$ 774,896.63
Outflow				
Land Purchase	$ 1,829,500.00			
Additional Equity		$ 828,556.74	$ 828,556.74	$ 53,660.12
Closing Costs	$ 100,000.00			
Loan Fees	$ 213,025.91			
Direct Costs		$ -	$ -	$ 774,896.63
Principal Reduction				
Interest Cost		$ -	$ -	$ -
Property Tax	$ 22,868.75			
Sales Expense	$ -	$ -	$ -	$ -
Total Outflow	$ 2,165,394.66	$ 828,556.74	$ 828,556.74	$ 828,556.74
Net Cash flow	$ (1,665,394.66)	$ (828,556.74)	$ (828,556.74)	$ (53,660.12)
Internal Rate of Return	21.512%			
Net Present Value	$343,468.87		15% required rate of return	

Table 21 Continued - Cash Flow Analysis, Subsidy Analysis

Developer Cash Flow	Month 4	Month 5	Month 6	Month 7
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Interest Draw	$ 5,811.72	$ 12,069.49	$ 18,374.18	$ 24,726.17
Subsidy				
Total Inflow	$ 834,368.47	$ 840,626.23	$ 846,930.93	$ 853,282.91
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 828,556.74	$ 828,556.74	$ 828,556.74
Principal Reduction				
Interest Cost	$ 5,811.72	$ 12,069.49	$ 18,374.18	$ 24,726.17
Property Tax				
Sales Expense				
Total Outflow	$ 834,368.47	$ 840,626.23	$ 846,930.93	$ 853,282.91
Net Cash flow	$ -	$ -	$ -	$ -

Table 21 Continued - Cash Flow Analysis, Subsidy Analysis

Developer Cash Flow	Month 8	Month 9	Month 10	Month 11
Inflow				
Sales				
Sales Revenue				
Commercial Value				
Construction Draw	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Interest Draw	$ 31,125.79	$ 37,573.41	$ 40,962.30	$ 44,376.60
Subsidy				
Total Inflow	$ 859,682.53	$ 451,851.78	$ 455,240.67	$ 458,654.97
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 828,556.74	$ 414,278.37	$ 414,278.37	$ 414,278.37
Principal Reduction				
Interest Cost	$ 31,125.79	$ 37,573.41	$ 40,962.30	$ 44,376.60
Property Tax				
Sales Expense				
Total Outflow	$ 859,682.53	$ 451,851.78	$ 455,240.67	$ 458,654.97
Net Cash flow	$ -	$ -	$ -	$ -

Table 21 Continued - Cash Flow Analysis, Subsidy Analysis

Developer Cash Flow	Month 12	Month 13	Month 14	Month 15
Inflow				
Sales		3	3	3
Sales Revenue		$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw	$ 414,278.37			
Interest Draw	$ 47,816.51	$ 51,282.23	$ 46,109.69	$ 40,898.36
Subsidy				
Total Inflow	$ 462,094.89	$ 1,118,282.23	$ 1,113,109.69	$ 1,107,898.36
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs	$ 414,278.37			
Principal Reduction		$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 47,816.51	$ 51,282.23	$ 46,109.69	$ 40,898.36
Property Tax		$ 22,868.75		
Sales Expense		$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 462,094.89	$ 868,454.88	$ 840,413.59	$ 835,202.26
Net Cash flow	$ -	$ 249,827.35	$ 272,696.10	$ 272,696.10

Table 21 Continued - Cash Flow Analysis, Subsidy Analysis

Developer Cash Flow	Month 16	Month 17	Month 18	Month 19
Inflow				
Sales	3	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value				
Construction Draw				
Interest Draw	$ 35,647.94	$ 30,358.14	$ 25,028.68	$ 19,659.24
Subsidy				
Total Inflow	$ 1,102,647.94	$ 1,097,358.14	$ 1,092,028.68	$ 1,086,659.24
Outflow				
Land Purchase				
Additional Equity				
Closing Costs				
Loan Fees				
Direct Costs				
Principal Reduction	$ 740,953.90	$ 740,953.90	$ 740,953.90	$ 740,953.90
Interest Cost	$ 35,647.94	$ 30,358.14	$ 25,028.68	$ 19,659.24
Property Tax				
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 829,951.84	$ 824,662.05	$ 819,332.58	$ 813,963.14
Net Cash flow	$ 272,696.10	$ 272,696.10	$ 272,696.10	$ 272,696.10

Table 21 Continued - Cash Flow Analysis, Subsidy Analysis

Developer Cash Flow	Month 20	Month 21	Month 22
Inflow			
Sales	3	3	3
Sales Revenue	$ 1,067,000.00	$ 1,067,000.00	$ 1,067,000.00
Commercial Value			$ 1,695,000.00
Construction Draw			
Interest Draw	$ 14,249.53	$ 8,799.24	$ 3,308.08
Subsidy			
Total Inflow	$ 1,081,249.53	$ 1,075,799.24	$ 2,765,308.08
Outflow			
Land Purchase			
Additional Equity			
Closing Costs			
Loan Fees			
Direct Costs			
Principal Reduction	$ 740,953.90	$ 740,953.90	$ 444,385.99
Interest Cost	$ 14,249.53	$ 8,799.24	$ 3,308.08
Property Tax			
Sales Expense	$ 53,350.00	$ 53,350.00	$ 53,350.00
Total Outflow	$ 808,553.43	$ 803,103.15	$ 501,044.07
Net Cash flow	$ 272,696.10	$ 272,696.10	$ 2,264,264.01

Table 22 - Retail Discounted Cash Flow

Retail - Discounted Cash Flow Analysis		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Leasable Square Footage		10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Annual Lease Rate per Square Foot		$ 30.00	$ 30.90	$ 31.52	$ 32.15	$ 32.79	$ 33.45	$ 34.12	$ 34.80	$ 35.49	$ 36.20	$ 36.93
Potential Gross Income		$ 300,000	$309,000	$315,180	$321,484	$327,913	$334,472	$341,161	$347,984	$354,944	$ 362,043	$369,284
Vacancy	20%	$ 240,000	$247,200	$252,144	$257,187	$262,331	$267,577	$272,929	$278,387	$283,955	$ 289,634	$295,427
Operating Expenses	30%	$ 72,000	$ 74,160	$ 75,643	$ 77,156	$ 78,699	$ 80,273	$ 81,879	$ 83,516	$ 85,187	$ 86,890	$ 88,628
Net Operating Income		$ 168,000	$173,040	$176,501	$180,031	$183,631	$187,304	$191,050	$194,871	$198,769	$ 202,744	$206,799
Reversion Value											$2,067,988	
Present Value	12%	$ 150,000	$137,946	$125,630	$114,413	$104,197	$ 94,894	$ 86,421	$ 78,705	$ 71,678	$ 731,115	
Sum PV		$1,695,000										
Cap Rate Today	12%											
Growth Rate	2%											

Table 23 - Condominium Price Discovery

Income Range		Population Count	Percent of Population	Maximum Permissible Ratio - Income to Housing Expense**	Maximum Annual Housing Expense	Maximum Monthly Housing Expense	Est. Property Tax	Estimate Condo Price To Calc Prop Insurance	Estimate Property Tax	Avg. Property Insurance	Maximum Annual Debt Service	Financable Amount	Condo Price
$ -	$ 9,999	15,962	9.20%	28%									
$ 10,000	$ 14,999	8,519	4.90%	28%									
$ 15,000	$ 19,999	9,961	5.80%	28%									
$ 20,000	$ 24,999	9,471	5.50%	28%									
$ 25,000	$ 29,999	9,113	5.30%	28%									
$ 30,000	$ 34,999	9,883	5.70%	28%									
$ 35,000	$ 39,999	9,069	5.20%	28%									
$ 40,000	$ 49,999	17,779	10.30%	28%									
$ 50,000	$ 59,999	15,088	8.70%	28%									
$ 60,000	$ 74,999	18,067	10.50%	28%									
$ 75,000	$ 99,999	20,203	11.70%	28%	$ 24,500	$ 2,042	1.25%	$ 305,000	$ 3,813	$ 1,000	$ 19,687	$273,641	$ 304,045
$100,000	$124,999	11,635	6.70%	28%	$ 31,500	$ 2,625	1.25%	$ 395,000	$ 4,938	$ 1,000	$ 25,562	$355,299	$ 394,777
$125,000	$149,000	7,617	4.40%	28%	$ 38,360	$ 3,197	1.25%	$ 485,000	$ 6,063	$ 1,000	$ 31,298	$435,013	$ 483,348
$150,000		10,508	6.10%	28%	$ 42,000	$ 3,500	1.25%	$ 530,000	$ 6,625	$ 1,000	$ 34,375	$477,788	$ 530,876
	Amortization Period		30	years									
	Interest Rate		6%										
		**Housing Income Ratio Expense includes principal, interest, property taxes and issurance on the property											

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