TRANSIT-ORIENTED MULTIFAMILY REDEVELOPMENT OF AN OBSOLETE URBAN INFILL INDUSTRIAL SITE: IS IT FEASIBLE?

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TRANSIT-ORIENTED MULTIFAMILY REDEVELOPMENT OF AN OBSOLETE URBAN INFILL INDUSTRIAL SITE: IS IT FEASIBLE?

A Project

by

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Abstract

of

TRANSIT-ORIENTED MULTIFAMILY REDEVELOPMENT OF AN OBSOLETE URBAN INFILL INDUSTRIAL SITE: IS IT FEASIBLE?

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Building transit-oriented housing in established urban core neighborhoods continues to entice community stakeholders and developers alike. On January 18, 2011, the *Sacramento Bee* reported that the Sacramento Municipal Utility District (SMUD) had recently purchased a new site to relocate its corporate yard facility (Daysong, 2011). This new East Campus Operations Center, located in southern Sacramento at Kiefer Boulevard and Bradshaw Road, will replace SMUD's existing 20-acre corporate yard, which SMUD will sell to developers sometime after 2014. The current yard sits directly behind SMUD's corporate headquarters at 6201 S Street in Sacramento, California, with substantial frontage along 59th Street between Folsom Boulevard and U.S. Highway 50. This existing yard represents one of the largest infill parcels that could be redeveloped in the region, after the 200-acre plus Downtown Railyard project, the 72-acre Curtis Park Village project, and the 65-acre Township 9 project in the Richards Boulevard area. Given this circumstance and the site's desirable East Sacramento location it is likely there will be high demand among developers for such an opportunity. Assuming the role of a

developer for this project, I am proposing a transit-oriented multifamily redevelopment concept for the site once it becomes available sometime after 2014. After collecting background information, analyzing market trends, conceiving a redevelopment concept that theoretically meets a future demand, and testing the concept's physical and financial viability given a specific set of facts and my own assumptions, I determine that my proposed redevelopment is a viable redevelopment opportunity.

_____, Committee Chair
Nuriddin Ikromov, Ph.D.

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Date

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INTRODUCTION

Building transit-oriented housing in established urban core neighborhoods continues to entice community stakeholders and developers alike. On January 18, 2011, the *Sacramento Bee* reported that the Sacramento Municipal Utility District (SMUD) had recently purchased a new site to relocate its corporate yard facility (Daysong, 2011). This new East Campus Operations Center, located in southern Sacramento at Kiefer Boulevard and Bradshaw Road, will replace SMUD's existing 20-acre corporate yard, which SMUD will sell to developers sometime after 2014. The current yard sits directly behind SMUD's corporate headquarters at 6201 S Street in Sacramento, California, with substantial frontage along 59th Street between Folsom Boulevard and U.S. Highway 50. This existing yard represents one of the largest infill parcels that could be redeveloped in the region, after the 200-acre plus Downtown Railyard project, the 72-acre Curtis Park Village project, and the 65-acre Township 9 project in the Richards Boulevard area. Given this circumstance and the site's desirable East Sacramento location it is likely there will be high demand among developers for such an opportunity. Assuming the role of a developer for this project, I am proposing a transit-oriented multifamily redevelopment concept for the site once it becomes available sometime after 2014.

Purpose of Project

The primary purpose of this project is to demonstrate how I conceived a transit-oriented multifamily redevelopment concept for the existing corporate yard site and to

explore my concept's feasibility. This demonstration of viability will be accomplished by examining the site's land use constraints, conducting original market research, and exploring physical and financial feasibility.

Miles et al. (2007) define a feasibility study as "the formal demonstration that a proposed project is or is not viable." Before acquisition and formal commitment, a developer must undertake a feasibility study to identify the type of project to be developed and to serve as an organizational framework for determining a proposed project's viability. In our highly complex economy and increasingly regulated society, every proposed development project requires thoughtful, exhaustive investigation. Moreover, the need for such detailed study is crucial to the success of each development project so that unique issues can be identified, analyzed, and resolved. Investing the time and resources to complete such analysis prior to site acquisition will uncover issues and constraints not immediately known, and in many cases, weigh heavily on the project's feasibility.

To my knowledge, there has been no feasibility of alternate uses of the subject property since the site has been in its current use for more than 60 years. (Shaw, 2008) The SMUD site represents a redevelopment opportunity of an obsolete industrial facility located within a highly desirable infill location. Any future redevelopment project on the site will require substantial demolition, infrastructure, toxics remediation, and site preparation, and will likely be subject to contentious scrutiny from a host of governmental, community, and interest groups.

Real Estate Development Process

Real estate development is both art and science and therefore the process is difficult to define in terms of a systematic approach. For this project I will be using the eight-stage model offered by Miles et al. (2007) as a foundation. Stage one is the inception of an idea. The inception of an idea involves many elements. Most ideas in development are a combination of intuition, interest, creativity, and rigorous market research. In some cases a developer has an idea and is looking for a physical site, while in other cases the opposite is true. In the case of the subject property, I identified the site through reading a *Sacramento Bee* article indicating that the property owner, SMUD, will be relocating its corporate yard facility and ultimately selling the subject property once construction of their new yard is complete. Developers generally need extensive background information to formulate good ideas because the most successful development projects come from creative ideas balanced with extensive knowledge and experience.

Stage two is refinement of the idea. In this stage a developer's idea must either evolve into a particular project design associated with a specific site or be abandoned before extensive resources are committed to the project. Finding and acquiring a site and making the legal and physical feasibility are the primary tasks of stage two. By the end of stage two a developer should be prepared to make a commitment decision and have the basic framework for further assessment of a project's viability.

Stage three is the formal feasibility study. The goal of this stage is to invest considerable resources to demonstrate viability of the idea internally and to the

development team participants and stakeholders involved. While stage two provides the framework for feasibility testing, stage three furthers the analysis at a substantially higher physical and financial cost. A developer can still cancel a project at the end of stage three, however, a strong intuitive feeling for the project must have resulted from stage two to induce the developer to make the additional financial commitment to carry out the necessary study required in stage three. The studies produced in stage three will ultimately serve as a project-marketing tool and give direction to all of the members of the proposed development team. Additionally, a formal feasibility study represents an important management tool providing multiple forms of risk control over several subsequent stages of the development process.

Stages four and five are contract negotiation and formal commitment. During these stages a developer must strategically negotiate and formalize the agreements that precede physical construction. These agreements, which include those with all of the various development team participants and stakeholders, outline the systematic plan of making the project happen. At this point, the developer moves from the role of idea creator to that of project manager, ensuring that time, budget, and all of the participants' responsibilities are as tightly controlled as possible.

Stage six and seven are physical construction and completion/formal opening. By the time that the developer has initiated physical construction, the commitment to a project is almost completely irreversible, at least not without tremendous financial and professional loss. As project manager, the developer must ensure that all participants perform their contractual obligations on time and carefully monitor the progress. While

the feasibility study remains an important management tool providing the framework for a developer to quickly evaluate changing market conditions, the contracts negotiated and formalized in the previous stages have created binding obligations and any future changes become more cumbersome and expensive to implement. The completion and formal opening stage comprises many elements including training the operations staff, connecting utilities, beginning on-site operations, final marketing of the development, grand opening, tenants' moving in, and a transition in financing from the construction loan to a permanent loan. Stage seven is the end of the active phase of real estate development and sets the stage for asset and property management.

Finally, stage eight is asset and property management. Creating value in tangible assets, such as real estate, involves a project's long-term viability. Therefore, successful asset and property management ensure that a development project lives up to the purpose it was created to serve. Initially, a developer creates value by matching an idea to a physical site while guiding the process in an efficient way. At the end of the development process, the asset and property management functions work to increase future value through leasing and effective operations management.

Scope of Project

This project aims to use the culminating knowledge and perspectives gained through my professional experiences in addition to the interdisciplinary concepts studied in the Urban Land Development program. My professional experience includes over ten years of commercial real estate brokerage, primarily concentrated within the multifamily industry. In this role I assisted private and institutional investors, developers, and

affordable housing clients with the acquisition and disposition of multifamily properties. Over the course of ten years I represented clients in transactions with total consideration valued at more than $130 million. During this time I developed specific knowledge and perspectives that will prove valuable for this project, including: financial underwriting, capital markets, industry contacts, market research, and analysis. This experience, combined with the Urban Land Development curriculum, will help contribute to my project's overall authenticity and originality.

The purpose of this project is to demonstrate how I conceived my redevelopment concept and to explore the concept's feasibility. The scope of this project isn't intended to be conclusive, but rather function as an organizational framework to identify necessary conditions that determine feasibility at different stages of decision-making. Considering that the subject property isn't currently on the market and isn't anticipated to become available until sometime after 2014, this project will focus on the pre-acquisition stage of feasibility, or stages one and two of the eight-stage model offered by Miles et al (2007). A pre-acquisition feasibility study can cover many disciplines, each referring to the various interdependent elements that a developer must consider prior to moving forward with a development project. My feasibility study will focus on three essential areas: land use considerations, market study, and financial analysis. These three areas, once identified, organized, and finally analyzed, will provide the framework to confirm certain conditions necessary for my redevelopment concept to be feasible.

Before moving on, it is imperative that I mention an important disclaimer. Real estate development is both an art and a science. Accordingly, real estate development

feasibility never demonstrates absolute certainty. Many of the assumptions I will use in this project, especially those involving market conditions, are inherently variable in nature and therefore are only as valid as the sources used to make them. Additionally, the subject property isn't currently on the market, so there is no indication as to what the property owner (SMUD) is expecting in terms of purchase price and delivery condition. Many of these issues will evolve and be negotiated through the many dynamic stages of the development process. So, a concurrent purpose to my project is to determine what price a developer pursuing my redevelopment concept would be willing to pay SMUD for acquisition of the site.

Project Layout

This project consists of five remaining chapters: background information, a market study, a description and details of my redevelopment concept, feasibility analysis, and a conclusion and recommendation. Below are brief descriptions of each section.

The background information chapter will introduce the subject property and provide background about how I conceived my redevelopment concept. Through identification of the various elements of the subject property, I will examine the physical characteristics and policy considerations to provide guidance on the inception of my redevelopment concept.

The market study chapter will observe historical data on the Greater Sacramento region, competitive submarket, multifamily market, and capital markets. Through historical examination I can forecast future trends making feasibility analysis more

accurate. This chapter will also conclude with general thoughts on future trends as they relate to the overall multifamily market.

The redevelopment concept chapter will offer details about my target market and concept design. In terms of concept design, while actual architectural designs are beyond the scope of this project, illustrations of other comparable projects will provide visual examples of specific design features that influence the features I will incorporate into my redevelopment concept. Observing comparable projects will also guide development cost assumptions as specific detailed costs for the subject property fall outside the scope of this project. I will identify the redevelopment concept's projected target market so that the market research in the preceding chapter can be examined more specifically. Additionally, this chapter will provide guidance to be considered during financial analysis.

The feasibility analysis chapter will begin with a description of the methodology used to analyze the redevelopment concept. This section will essentially test the viability of the project as identified in the preceding chapter. With the redevelopment concept details and the target market identified, a focused market study will provide the inputs for financial analysis. Additionally, I will perform a sensitivity analysis that will show the possible results of variable costs and market conditions. By the end of this chapter I will have enough data to make a decision on proceeding to the next stage of the development process (formal feasibility study) or to abandon the idea altogether.

The conclusion and recommendation chapter summarizes the findings of the analysis and discusses the potential viability of my redevelopment concept. Within this

chapter, I also identify the necessary conditions and factors that make this proposed redevelopment concept feasible. And finally, this section discusses the possibility of other potential redevelopment concepts and their forecasted viability.

Chapter 2

BACKGROUND INFORMATION

This chapter will introduce the SMUD site and provide details on how I generated my redevelopment concept. A good idea typically requires extensive background information and specific knowledge about market conditions. This section shows how a developer would gather and interpret this background information. First, a developer must gather specific information about the subject property such as the existing conditions, physical characteristics, and current infrastructure. Second, a developer must consider the legal and political aspects relevant to the site and region. With this background information gathered and organized, a developer can generate an idea that is potentially physically and legally viable. This chapter will take these two steps in gathering information and ultimately provide the foundation for how I conceived my redevelopment concept.

Subject Property

The subject property is approximately 20-acres situated just west of SMUD's corporate headquarters located at 6201 S Street in East Sacramento, California. Looking at Figures 1 and 2, the subject property has approximately 814 feet of frontage along 59th Street, is dissected by the Regional Transit (RT) Light Rail Gold Line tracks, and is directly across the street from the 59th Street RT Station that provides public transit between downtown Sacramento and Folsom.

Figure 1 - View of 59th Street Looking North

Figure 2 - View of RT Gold Line Tracks

Positioned adjacent to the 59th Street off-ramp of U.S. Highway 50, the SMUD site borders the Camellia Shopping Center to the north and a neighborhood of approximately 60 single-family residences to the west. To effectively conceive and design a successful

redevelopment concept, I must identify the SMUD site's existing conditions to fully understand the scope of demolition and contamination concerns. Additionally, I need to examine the site's physical characteristics to guide development of a feasible design.

Existing Conditions

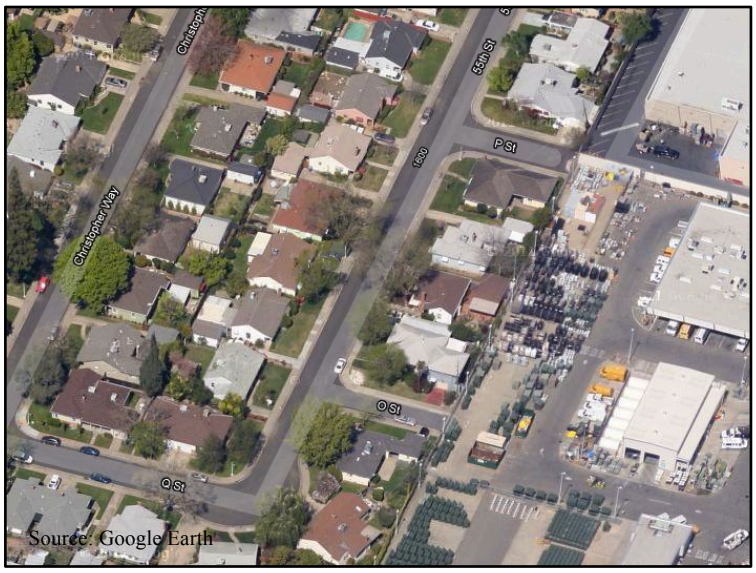
Over the last 60 years SMUD has used this property to store and maintain it's more than 700-vehicle fleet. Existing improvements on the property include multiple structures and paved concrete parking surface. Prior to SMUD's acquisition, the site was made up of single-family homes built primarily around the time of World War II. Evident from this era are P and Q Streets that now dead end at the SMUD site from the western property line as illustrated in Figures 3, 4, and 5.

Figure 3 - Photo of P Street Terminating at SMUD Site

Figure 4 - Photo of Q Street Terminating at SMUD Site

Source: Dylan Herrick

Figure 5 - Satellite View of Western Edge of SMUD Site



Source: Google Earth

Considering SMUD's historical industrial use, I anticipate that environmental contamination exists. It is uncertain as to what level of contamination exists, but considering the property has been exposed to many years of vehicle maintenance activity,

it is likely that significant toxic remediation will be necessary prior to any physical redevelopment efforts.

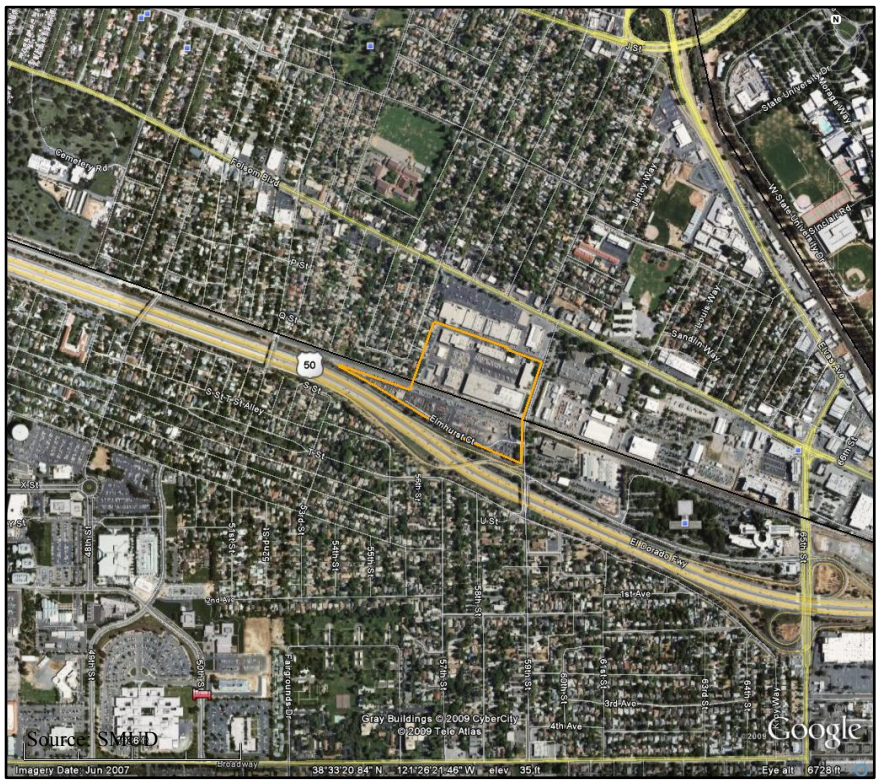
Physical Characteristics

The physical characteristics of a site not only play a significant role in determining a development projects feasibility, but more often lead developers to potential ideas. To examine a site's physical characteristics I must address the subject property's shape and size, current infrastructure, and topography.

Shape & Size

Looking at Figure 6, the SMUD site has a very atypical shape, making redevelopment into a new use more difficult.

Figure 6 - Satellite View of SMUD Site



While the subject property consists of approximately 20-acres, because of its shape, it's unlikely that the site will support the same buildable square feet as another 20-acre site more uniform in shape. Therefore, considerable effort and creativity will be required in terms of site design to determine a project layout that is both physically and financially feasible. Additionally, the site is dissected by the Sacramento Regional Transit tracks making a contiguous site plan improbable. In working through site design, a developer will likely engage outside consultants – possibly a land design professional, an architect, and an engineer – to survey the site to determine how a redevelopment project could or could not be accomplished. While this type of design feasibility lay outside the scope of this project, I must give it consideration early in the conception stage of my redevelopment concept.

Infrastructure

Infrastructure is described as "the physical components of interrelated systems providing commodities and services essential to enable, sustain, or enhance societal living conditions" (Fulmer, 2009). Infrastructure, as it relates to the SMUD site, refers to the roads and utilities necessary to support my redevelopment concept. Primarily, I'm concerned with access to public utilities such as water, sewer, power, and gas, as well as the condition and capacity of surrounding roads.

The SMUD site has all of the public utilities needed for my redevelopment concept, however a multifamily use will require a significant increase in capacity. Considering the urban-infill location and surrounding land uses, I'm assuming that capacity will not be a major concern. I anticipate that considerable capital will be needed

to upgrade current service lines to support the proposed increase in density with a change to multifamily use.

The SMUD site, like most urban-infill sites, is constrained by roads and traffic corridors originally designed to support capacities more akin to the era in which they were constructed. Primary access to the site is on 59th Street. This two-lane road is a north/south traffic corridor that averages approximately 13,500 automobiles daily (Sacramento DOT, 2009). Additionally, adjacent to the subject property is an on-ramp and off-ramp for U.S. Highway 50, a major east/west freeway that averages approximately 215,000 automobiles daily (Highway 50 TMA, 2004). According to Paul Noble, President of the East Sacramento Improvement Association, a community advocacy group, current ingress/egress traffic generated by the SUMD vehicles is a problem. Therefore, an increased amount of traffic beyond the current condition will likely result in vehicle traffic beyond an acceptable capacity. I predict that increasing road capacity will be a major hurdle during the project approval process. Creative thinking and collaboration with City decision-makers as well as community stakeholders will be necessary to draft widely accepted solutions.

Topography

Topography of a site graphically describes surface features. The subject property has a generally flat topography with little to no visible change in grade. This feature will make the physical construction of the project relatively less complicated and straight-forward. However, there is a grade change of approximately 50 feet immediately south of the subject property. This downslope represents the trench for U.S. Highway 50 and the

59th Street on-ramp. This feature is not projected to have any negative effects to redevelopment efforts.

Legal Considerations

Jurisdiction

In California, every county and city has a legislative body and planning agency with state-granted authority over land use regulation. The subject property is located within the City of Sacramento where the legislative body is the City Council and the planning agency is the City Planning Commission.[1] Approval of any new project is reviewed by staff within the City's Community Development Department (CDD) and ultimately acted upon by the Planning Commission and City Council. While final approval rests with the City Council, it is important to recognize that although staff members of the CDD merely recommend actions to the City Planning Commission and City Council, they wield tremendous influence over the final decisions. Because City Council and City Planning Commission members have varied backgrounds and staggered terms, local CDD staff members inherently control most of the information that the City Council reviews to assist in their decision-making. Any redevelopment project must take into consideration the City's overall land use goals, therefore, a developer must coordinate closely with City staff to ensure alignment of mutual interests.

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[1] The Sacramento City Council consists of a Mayor, elected by all City voters, and eight Council members, elected to represent separate districts in the City. Each Council member is required to live in the district they represent. The Mayor and Council members serve four-year terms with no term limits. Elections are staggered. The Sacramento City Planning Commission consists of nine members appointed by the Mayor and confirmed by City Council, who are residents of the City of Sacramento. The term of office of any member of the Planning Commission shall expire whenever such member ceases to be a resident of the city. Each member serves a four-year term with a two-term limit.

Considering that the SMUD site is dissected by the Sacramento Regional Transit Gold Line tracks, any redevelopment project will require the involvement of the Sacramento Regional Transit District. Additionally, the California Public Utilities Commission (CPUC), the state agency responsible for rail safety in California, will almost certainly need to be included early in the planning of any redevelopment project as well. My redevelopment concept design must take into consideration the goals and interests of the CPUC as it pertains to the rail tracks in addition to those of the Sacramento regional Transit District.

There are two more important that affect the subject property. First, the current perception of the Sacramento City Council is one of a city that is more focused on its divisions rather than moving forward (Shaw, 2011). This infighting has led to much uncertainty within the business community making it difficult for business leaders to forecast what lies ahead. Second, a redevelopment project for the subject property isn't likely to come to fruition until sometime after 2014, therefore, it is plausible that members of both the City Council and City Planning Commission will be a different makeup than that of today. Any developer undertaking a redevelopment project for the SMUD site must keep abreast of the internal situations within both the City Council and City Planning Commission and plan accordingly.

Another stakeholder that will likely have tremendous influence over any redevelopment of the subject property is the community of East Sacramento where the site is located. Influential community groups include the East Sacramento Improvement Association, the McKinley East Sacramento Association, and the East Sacramento

Preservation Association. These associations, while having no legal jurisdiction, are grass roots community groups comprised of East Sacramento residents interested in maintaining the quality of life and character of the East Sacramento neighborhood. The East Sacramento Improvement Association offers on its website, "The ESIA was formed…to protect, maintain, and improve the unique blend of residential and commercial features of East Sacramento by representing the neighborhood at the City Planning Commission and City Council" (ESIA, 2011). The ESIA has been very successful over its 50-year history in defending the neighborhood from what it calls "inappropriate development." Considering that the subject property would require a zoning change to facilitate a multifamily use, and thus require City Planning Commission and City Council approval, acknowledging these community associations would be prudent early in the development process. In speaking with Paul Noble, President of the ESIA, a multifamily use for the subject property would be "appropriate development" in the view of the ESIA and a majority of the community stakeholders. That being said, considering the size of the subject property and location, Mr. Noble felt that the community would be extremely sensitive to every element of the project. Additionally, according to a *Sacramento Business Journal* article, Cyril Shah, former President of the ESIA stated that residents will be eager to hear plans for the SMUD site and have been a strong supporters of the redevelopment efforts of similar industrial properties around 65th Street and Folsom (Shaw, 2008). Therefore, collaborating with these stakeholders early in the design and conceptualization process will be mandatory to build community support and ensure project certainty.

General Plan

California requires every city and county to prepare and adopt a comprehensive and long-range general plan for its physical development.[2] The Sacramento 2030 General Plan contains a vision for the future based on the foundation of the City's Smart Growth Principles,[3] City Council adopted Vision and Guiding Principles for the General Plan,[4] and the Sacramento Area Council of Governments (SACOG) Region Blueprint Transportation and Land Use Plan.[5] Overall, six themes[6] emerge from this foundation to create a comprehensive general plan that provides the City of Sacramento with a consistent legal framework for land use decision-making. The recently adopted General Plan is a series of policy statements (in text and map form) that lays out the future of the City's physical development in general terms. All of the policies and goals represented in a general plan must be consistent throughout. Therefore, any redevelopment project must take into consideration the six fundamental themes and seek to incorporate them into the project conception so that no conflicts exist with the fundamental goals and policies of the General Plan.

The General Plan contains sections that cover specific topics relative to the City's physical development. While State Law requires that all General Plans address the same

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[2] California Government Code Section 65300

[3] Adopted by the Sacramento City Council in 2001, the City's 14 Smart Growth Principles established guidance for principals, decision makers, developers, and residents in terms of infill development, higher density, more transportation options and a better quality of life in sustainable, complete neighborhoods.

[4] Adopted by the Sacramento City Council in 2005, the Vision and Guiding Principles is a document that is meant to set out a vision that captures the City's key values and aspirations for Sacramento's future. The vision is for Sacramento to become the most livable city in America while the guiding principles flow from this vision to establish policy benchmarks for the General Plan update process.

[5] Adopted by the SACOG Board of Directors in 2004, the Preferred Blueprint Scenario is a bold vision for growth that promotes compact, mixed-use development and more transit choices as an alternative to low density development. The Scenario is part of SACOG's Metropolitan Transportation Plan for 2035, the long-range transportation plan for the six-county Sacramento Metropolitan Region that serves to link local government land use decisions with transportation planning and investment.

[6] The six themes that emerge in the General Plan are: Making Great Places, Growing Smarter, Maintaining a Vibrant Economy, Creating a Healthy City, Reducing our "Carbon Footprint", and Developing a Sustainable Future.

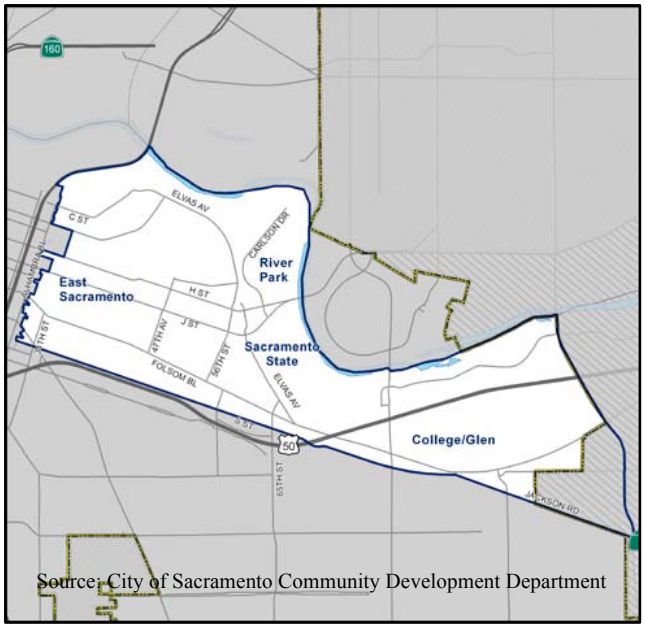
seven topics (or "elements"),[7] they may also include other topics of local interest chosen by the individual jurisdiction to ensure creation of a General Plan that best fits its unique circumstances.[8] In addition to the seven mandatory elements, the General Plan includes urban design, economic development, and historic and cultural resources. Again, all of the goals and policies must be consistent throughout; therefore, while my redevelopment concept may not be relevant to all ten elements, it must still be consistent with all of the goals and policies included throughout. In the conclusion chapter of this project I will analyze the relevant elements and my redevelopment concept's consistency or conflict.

The General Plan also contains ten community-planning areas meant to provide policy direction for the various areas of the city. The General Plan incorporates the community plans to supplement citywide policy based on conditions or issues unique to each community plan area. Again, all policies contained in the community plans must be consistent with those included in the General Plan. The SMUD site, separated by the RT tracks, is located within two separate community plan areas: the East Sacramento and Fruitridge/Broadway Community Plan Areas whose boundary is the RT tracks (shown in Figures 7 and 8). This circumstance will require a General Plan Amendment in addition to a land use designation change. According to the City of Sacramento's Long-Range Planning Department, SMUD was approached by City staff during the General Plan update process to determine if the site's owner had any future plans for expanding or relocating the yard site. For unknown reasons, SMUD declined any involvement for

[7] The required seven elements that must be addressed in ever General Plan are land use, circulation, housing, open space, conservation, safety, and noise (California Government Code 65302)
[8] California Government Code Section 65300.5

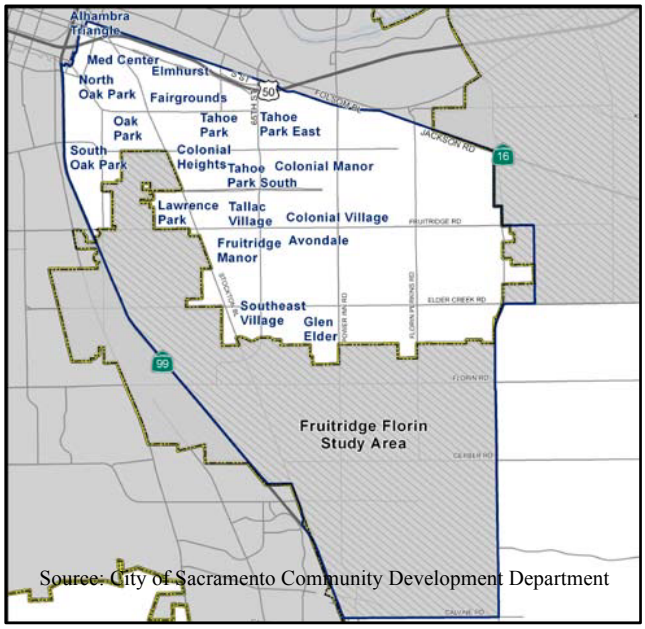
future planning of the site. Therefore, the General Plan doesn't reflect in map form any potential redevelopment project.

Figure 7 - East Sacramento Community Plan Area



Source: City of Sacramento Community Development Department

Figure 8 - Fruitridge/Broadway Community Plan Area



Source: City of Sacramento Community Development Department

Zoning

Zoning translates a general plan's broad policy statements into specific requirements of individual parcels of land. Essentially, zoning ordinances prescribe what can and cannot be built on each parcel. Primarily, zoning regulations have three dimensions: use, bulk, and impact (Fulton & Shigley, 2005). All three play an important role in shaping the look of new development. The use requirement will dictate what type of use is permitted on the site. Bulk requirements will establish the building's size and shape while the impact requirement will regulate how the building will perform in the context of its neighborhood.

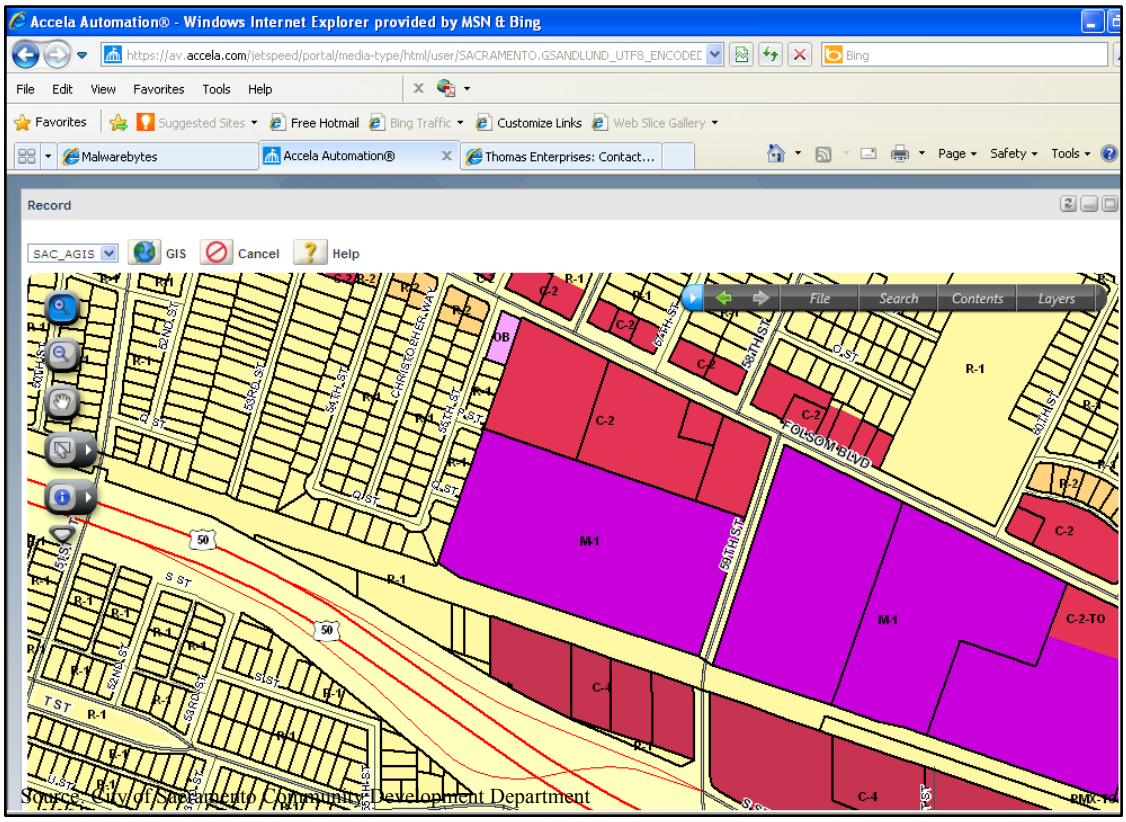
As shown in Table 1, the subject consists of twelve separate assessor parcel numbers, each with different zoning designations. According to City of Sacramento

Table 1 - Subject Property Parcel Numbers

Parcel	Zoning Designation	Zoning Description
008-0010-009	M-1	Light-Industrial
011-0073-001	R-1	Standard Single-Family
011-0073-002	R-1	Standard Single-Family
011-0073-003	R-1	Standard Single-Family
011-0073-004	R-1	Standard Single-Family
011-0073-006	R-1	Standard Single-Family
011-0073-007	C-4	Heavy Commercial
011-0073-008	Mixed	Mixed
011-0081-001	C-4	Heavy Commercial
011-0081-002	C-4	Heavy Commercial
011-0081-003	C-4	Heavy Commercial
011-0081-008	R-1	Standard Single-Family
Source: City of Sacramento Community Development Department		

Planning Staff,[9] this circumstance is likely the result of an outdated zoning regulation process at the time SMUD originally developed the property. As shown in Figure 9, the City's Geographic Information System (GIS) even has a different set of zoning designations for the entire site.

Figure 9 - City GIS Zoning Designations



Nevertheless, any new use will require a parcel merger and a new zoning designation so this current circumstance doesn't pose any foreseeable complications. Therefore, any redevelopment of the SMUD site will likely require a merger of the individual parcels into one single parcel and will require a change in the current mix of zoning to meet

[9] Based on a conversation with Greg Sandlund , Associate Planner with the City of Sacramento Long-Range Planning Department

current planning policy. To maintain consistency with the General Plan, a General Plan Amendment will also be needed to reflect the changes. Because zoning and General Plan Amendments are legislative decisions, they must ultimately be approved by the City Council.

CEQA

While the General Plan and zoning ordinances play the basic roles in land use planning, there is still another land use process that is not, strictly speaking, planning law: the California Environmental Quality Act, commonly known as CEQA. The CEQA process identifies information about the likely environmental consequences of any project and ensures that the public and elected officials debate those consequences before a decision is made. This process begins with an assessment of whether a specific project is subject to CEQA provisions. The local government with jurisdiction, or project approval authority, must conduct an Initial Study to determine if any probable environmental consequences of the project are likely to be significant. If so, an Environmental Impact Report (EIR) must be prepared, specifying the environmental damage and laying out ways to mitigate that damage. An EIR is an informational document that informs decision-makers and the general public of the potential significant environmental effects of a proposed project. An EIR must identify possible means to minimize the significant effects and describe a reasonable range of feasible alternatives to the project (Bass et al, 2004). The City of Sacramento, as lead agency for my redevelopment concept, must consider the information in the EIR along with any other available information in deciding whether to approve the project.

The SMUD site has been in its current use for the last sixty years so there hasn't been any environmental review under CEQA. When the City of Sacramento revised its General Plan in 2009, they created a Master EIR to cover all land use decisions consistent with the revised General Plan. Considering the scale, scope, and proposed redevelopment of the subject property, the City will need to prepare a Project-Level EIR will focus on the changes in the environment that would result from the development of the project, and examine all phases of the project including planning, construction, and operation. This Project-Level EIR will rely on data, environmental evaluations, mitigation measures, and other components of EIRs and Plans prepared by the City of Sacramento for areas within the project vicinity. Nevertheless, this process of environmental review is sure to be costly and take many months to complete. Therefore, a developer must allocate sufficient time and financial resources in their assumptions in order to accurately test a project's feasibility.

Chapter 3

MARKET STUDY

A market study provides data concerning both the historical and prospective relationships between supply and demand information. This information should form the basis for assumptions in financial feasibility analysis. The issues identified are all interrelated and a market study should demonstrate a consistency of rationale between the issues showing a consistent flow of logic addressing the interplay of factors affecting investment analysis assumptions (Mueller & Wincott, 1995). To develop this "rationale" and "flow of logic" it is critical to explore the appropriate set of data relative to the proposed development project. My redevelopment concept is a transit-oriented multifamily project, so a corresponding market study must examine the characteristics and demographics for both the general region as well as the competitive submarket. Additionally, the market study must examine historical data on the performance of the multifamily market and identify capital market trends. In this chapter, I identify and organize market data, and conclude with a section that analyzes and forecasts trends.

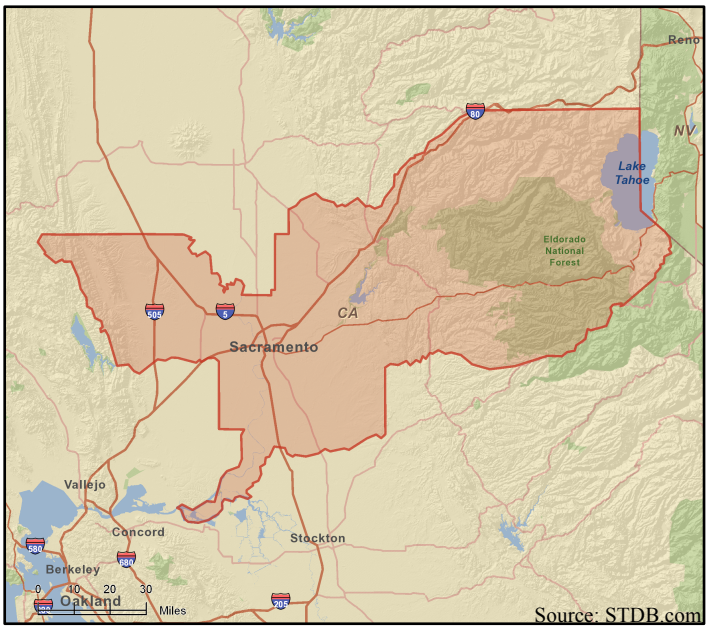
Greater Sacramento Region

I define the broader regional market area as the Sacramento-Arden Arcade-Roseville Metropolitan Statistical Area (MSA) as defined by the United States Census Bureau. This MSA, also known as the Greater Sacramento region, is located in the Central Valley of California, approximately 80 miles east of the San Francisco Bay Area. Until recently, the MSA was one of the fastest growing regions in the United States, emerging as a distinct metropolitan center as well as having more affordable housing for

commuters to the more expensive San Francisco Bay Area. Continued outward growth toward the periphery where land is cheaper to build on and is primarily used for agriculture resulted in urban sprawl in the Greater Sacramento region. Regional and local governments have taken steps (such as SACOG's Regional Blueprint[10]) to curb such outward growth and future projects that promote growth to the urban core are certain to receive more positive feedback from decision-makers.

The Sacramento-Arden Arcade-Roseville MSA is comprised of four counties (El Dorado, Placer, Sacramento, and Yolo) as illustrated in Figure 10. An essential first step in any market study is analysis of the MSA in which the SMUD site is located as it represents a well-defined economic and demographic base. Three variables used extensively in analysis at the MSA level are population, employment, and income.

Figure 10 - Sacramento Region Map

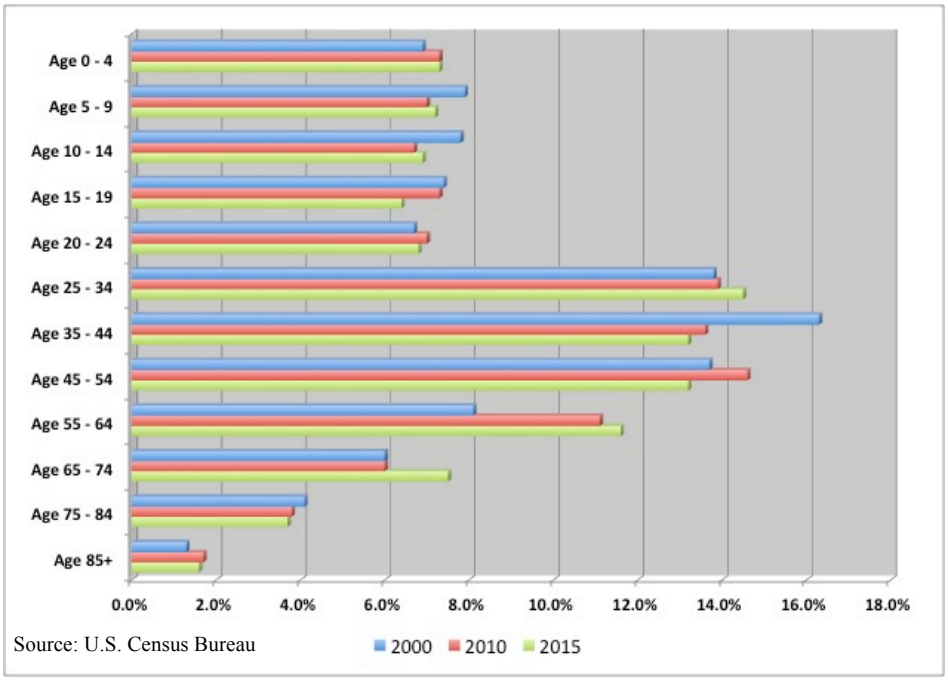


[10] The SACOG Board of Directors adopted the Preferred Blueprint Scenario in December 2004, a bold vision for growth that promotes compact, mixed-use development and more transit choices as an alternative to low density development.

Population[11]

The MSA's population grew by 17.6 percent from 2000 to 2010 with a current estimated population of 2,179,520 and the U.S. Census Bureau forecasts population to grow by 1.2 percent annually from 2010 to 2015 with a projected 2015 population of 2,312,999. This statistic makes the MSA the fourth largest in California. A concentrated share of the MSA's population (13.9 percent) is between 25 and 34 years old as of 2010 and the U.S. Census Bureau forecasts that popualtion to grow to 14.5 percent by 2015. The majority of the MSA's population (42.1 percent) is between the ages of 25 and 54 which the U.S. Census Bureau forecasts to contract to 40.9 percent by 2015 as illustrated in Figure 11.

Figure 11 - Sacramento Region Age Distribution



[11] The U.S. Census Bureau provided all population data

As of 2010, approximately 7.2 percent of the MSA population over 18 years old is enrolled in college, 1.3 percent are enrolled in graduate or professional school, and 68.4 percent are not enrolled in any school. Of the MSA population over 25 years old, 23.8 percent are high school graduates, 24.1 percent have some college but no degree, 29.3 percent have Associate's or Bachelor's degrees, and 10 percent have graduate or professional degrees. Additionally, of the MSA population over 15 years old, 31.3 percent have never been married, 51.8 percent are married, 5.4 percent are widowed, and 11.5 percent are divorced.

As of 2010, households in the region totaled 801,275, which is a 16.9 percent increase from 2000. The U.S. Census Bureau forecasts that households will grow by an annual rate of 1.17 percent to a total of 849,130 by 2015. Average household size has increased to 2.67 in 2010 from 2.65 in 2000 and, based on U.S. Census Bureau forecasts, will grow to 2.68 by 2015.

As of 2010, total housing units grew to 879,441, which represents an 18.8 percent increase from 2000. By 2015, the U.S. Census Bureau forecasts total housing units to grow to 944,501, which represents a 6.9 percent increase. Table 2 illustrates the breakdown of owner occupied, renter occupied, and vacant housing units for 2000, 2010, and 2015.

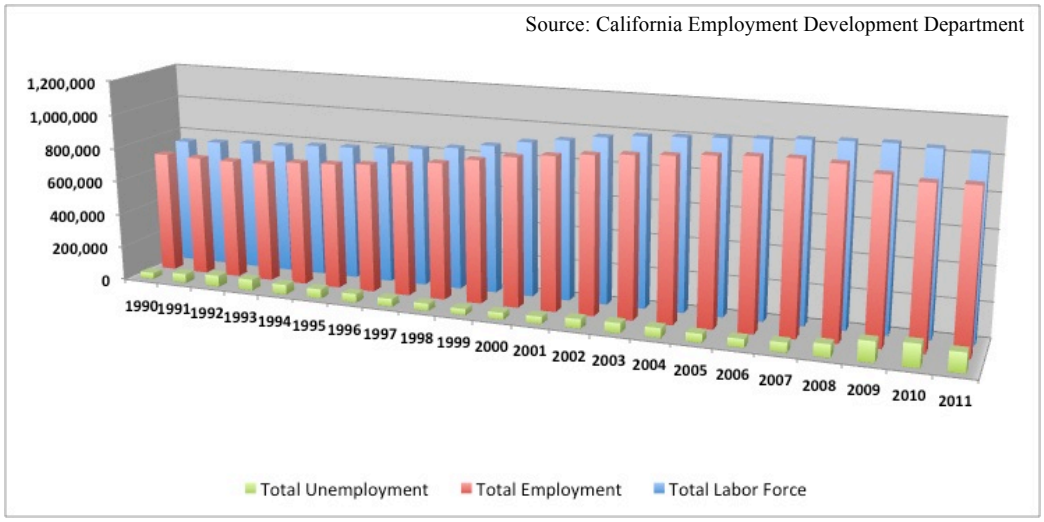
Table 2 - Sacramento Region Housing Units

	Housing Units		
	2000 Census	2010 Estimate	2015 Projected
Owner Occupied Housing Units	57.0%	55.5%	55.0%
Renter Occupied Housing Units	36.0%	35.9%	34.9%
Vacant Housing Units	7.0%	8.9%	10.1%
Total Housing Units	714,981	879,441	944,501
Source: STDB.com			

Employment[12]

The total labor force for the MSA as of 2011 was 1,028,700, which represents an 11.6 percent increase from 2000 despite a moderate annual decline from 2009. Total employment was 916,100, which is almost identical to the figure in 2002, however represents a 6,000 increase from 2010. Figure 12 illustrates the total employment and unemployment trend as it relates to the total labor force from 1990 to 2011. The total unemployment rate is 10.9 percent as of 2011, which represents a decline of 1.7 percent from 2010 but, a 6.6 percent increase from 2000.

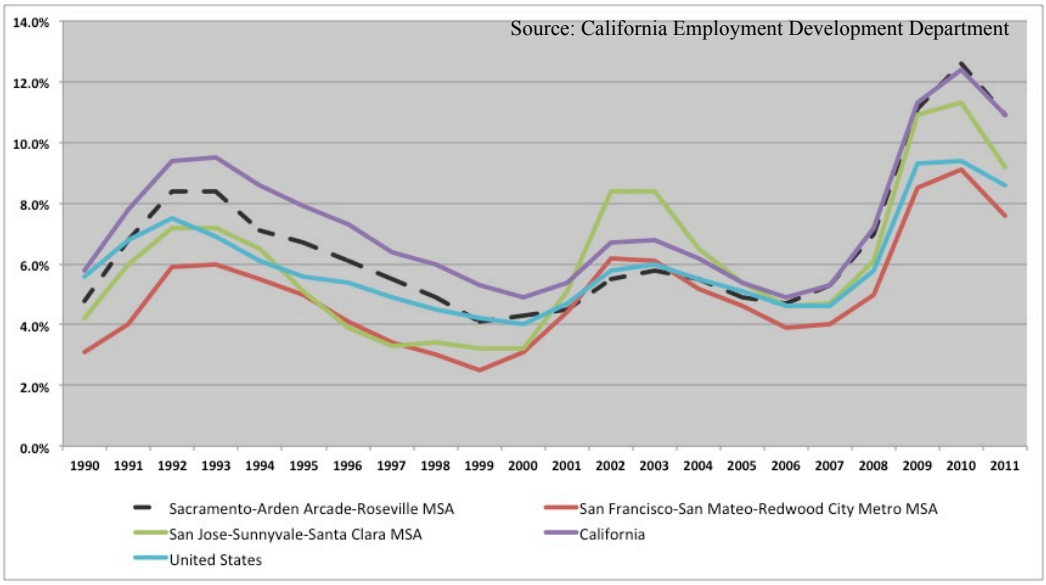
Figure 12 - Sacramento Region Historical Employment



[12] The California Employment Development Department provided all employment data

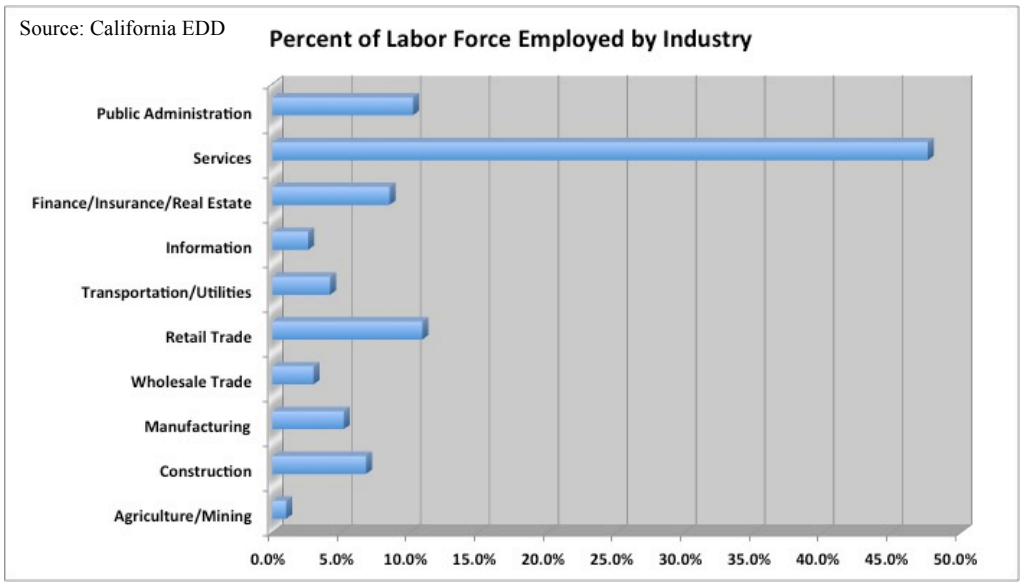
To illustrate how these figures relate to that of the overall economy as well as competitive markets, Figure 13 compares the Sacramento-Arden Arcade-Roseville MSA historical unemployment rate with that of two Bay Area MSAs, California, and the United States.

Figure 13 – Sacramento Region Unemployment Trend Comparison



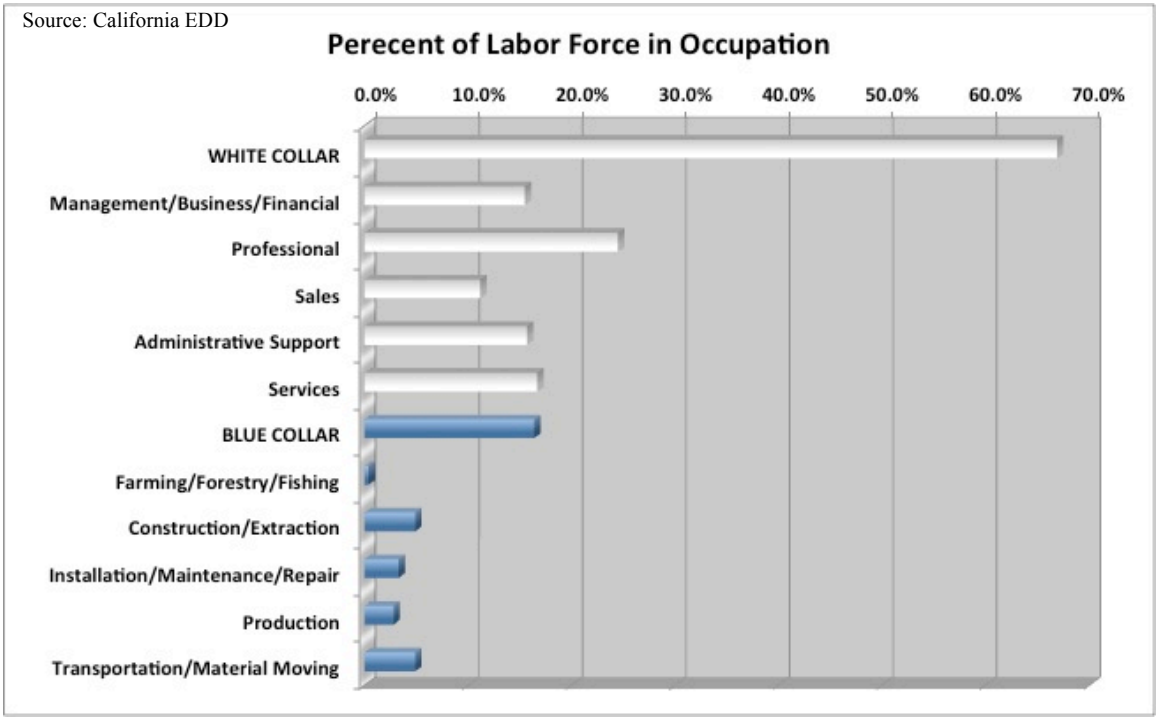
As depicted in Figure 14, observing employment by industry, of the total employed population over 16 years of age, the highest proportion (47.6 percent) works in the services industry.

Figure 14 – Sacramento Region Employment by Industry



Looking at Figure 15, of this same population, 66.9 percent are employed in white collar occupations.

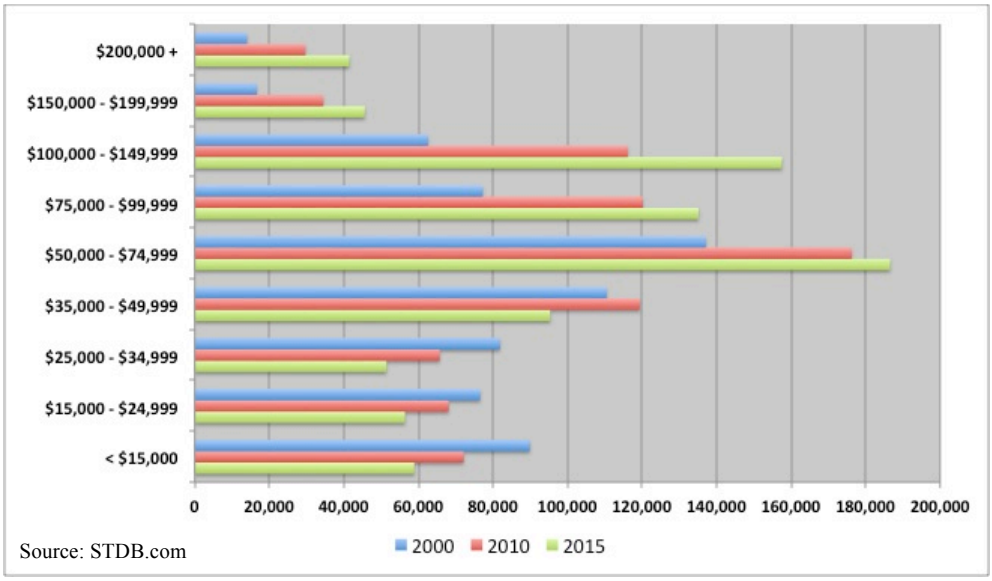
Figure 15 – Sacramento Region Occupation Distribution



Income[13]

As of 2010, median household income was $60,462, which represents a 23.7 percent increase from 2000, while per capita income was $28,065 in 2010, representing a 20.5 percent increase from 2000. The U.S. Census Bureau projects household income and per capita income to grow each by 12.4 percent between 2010 and 2015. Figure 16 illustrates the MSA's household income distribution indicating that a large share of regional households have incomes between $35,000 and $149,999 and are projected to grow substantially by 2015.

Figure 16 - Sacramento Region Income Distribution



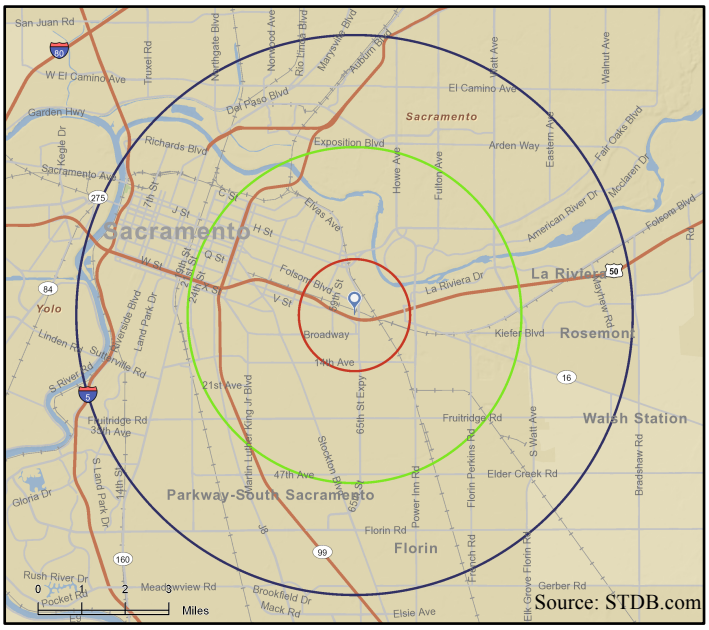
Competitive Submarket

The immediate neighborhood market area, also known as its competitive submarket, influences the SUMD site as well. Clapp (1987) defines a competitive submarket as "a geographical area surrounding the subject site that will provide a

[13] The U.S. Census Bureau provided all income data

substantial portion of the customers for the real estate project." Overall, the characteristics and demographics of the competitive submarket will have a more direct impact on the performance of the subject property. I define the competitive submarket by a 1-, 3-, and 5-mile radius from the subject property as illustrated in Figure 17**.**

Figure 17 - Competitive Submarket Map



I define the competitive submarket by these radiuses, or rings, because these rings represent the most efficient method of gathering and organizing demographic data. These rings include many City of Sacramento neighborhoods, such as East Sacramento, and County of Sacramento neighborhoods, such as Arden Park and Arden-Arcade. The area surrounding the SMUD site is rich with history, dating back to the first expansion of the City of Sacramento in the early 1900s. East Sacramento and the surrounding neighborhoods are some of the most desirable areas to live because of their close proximity to Downtown, vibrant Midtown, and central freeways. Additionally, East

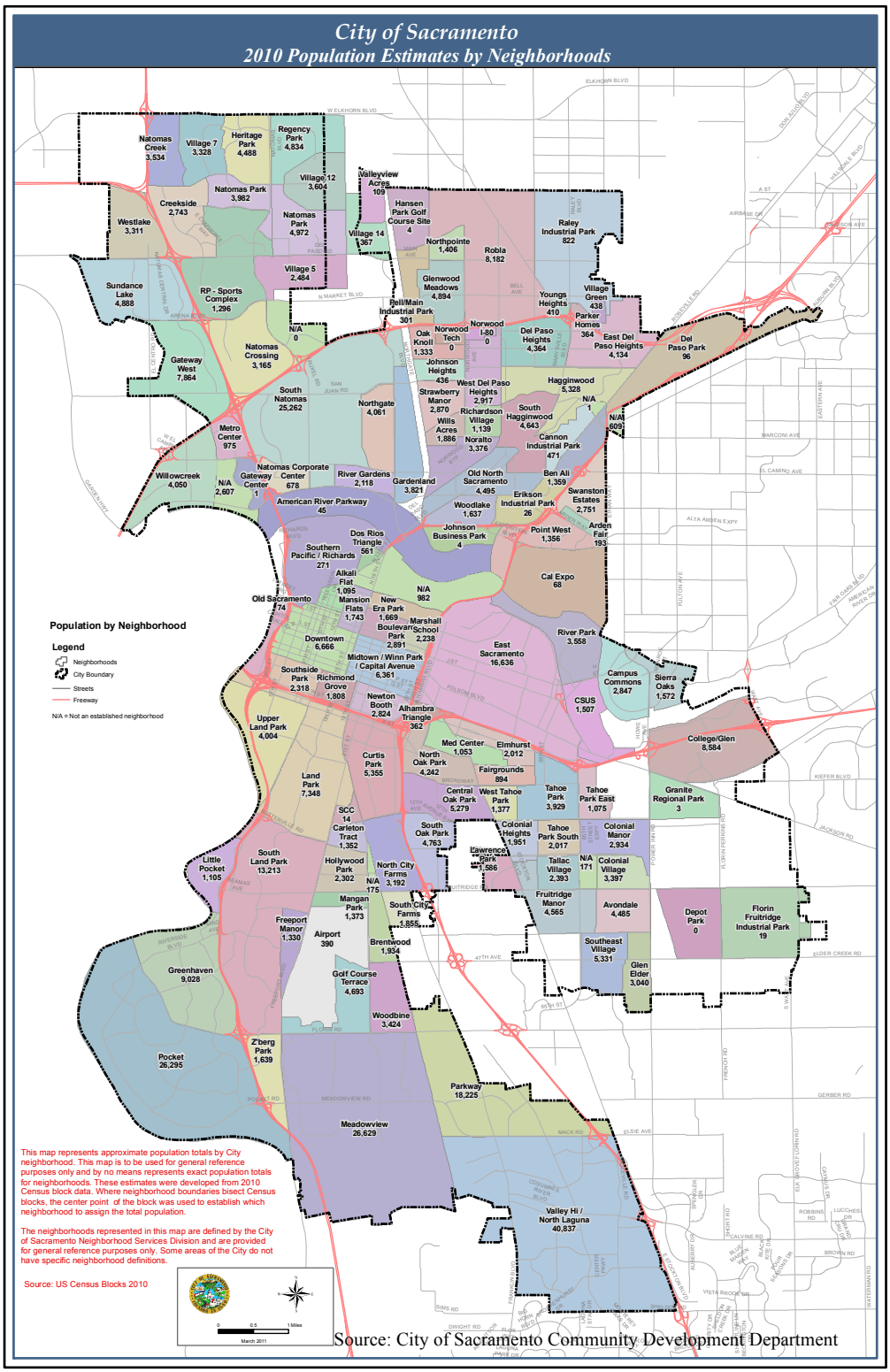
Sacramento is home to the Fabulous 40s and McKinley Park neighborhoods, both of which, until the recent real estate market crashed, have seen some of the largest real estate price appreciations relative to the Greater Sacramento Region as a whole.

Observation of population, employment, and income data are appropriate on the competitive submarket level as well. Using information obtained from STDB.com Site Reports, a subscription service offered by the Appraisal Institute, I gathered these demographics for the competitive submarket using a "ring" search, meaning that the information is organized by one, three, and five-mile radii from the SMUD site's address.

Population

Total population growth between 2000 and 2010 has been strongest (4.9 percent) at the 1-mile interval when compared to the 3- and 5-mile intervals (3.5 percent each). Additionally, the U.S. Census Bureau projects total population to grow between 2010 and 2015 at an annual rate of 0.42 percent at the 1-mile interval and 0.29 percent at the 3- and 5-mile intervals. These figures appear much lower when compared with that of the Greater Sacramento Region, which had a 1.76 percent annual growth rate from 2000 to 2010 and has a projected annual growth rate of 1.2 percent between 2010 and 2015. However, the SMUD site is located in a long-established neighborhood where very little new development has occurred or is projected to occur during those time periods. Any new redevelopment of large scale would almost certainly affect the total population figures for the competitive submarket in the future. For comparison, Figure 18 depicts all of the neighborhoods in the City of Sacramento and their corresponding 2010 total population figures.

Figure 18 - City of Sacramento Population by Neighborhood



Source: City of Sacramento Community Development Department

Observing Table 3, the vast majority of the total population is between 25 and 64 years old and the U.S. Census Bureau projects the population to remain that way through 2015.

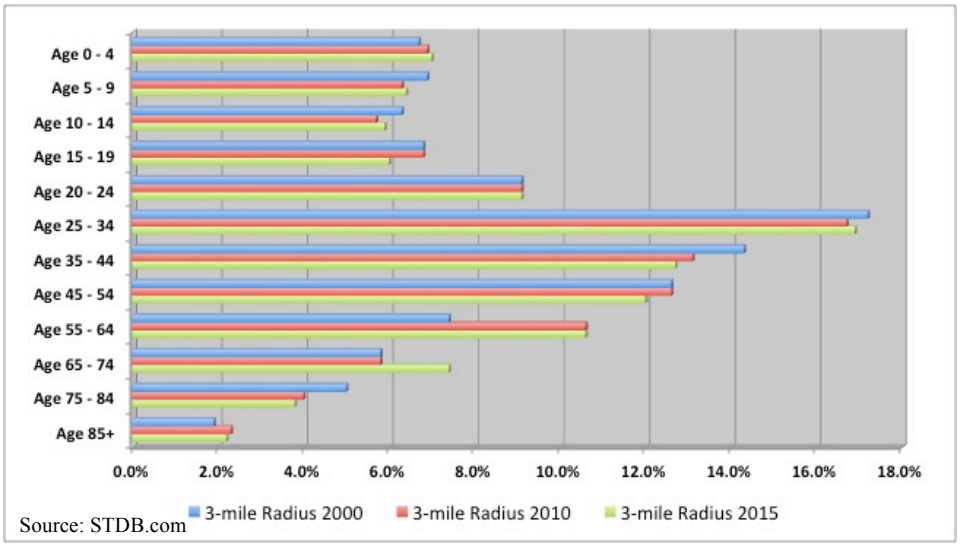
Table 3 - Competitive Submarket Age Distribution

	2000 Census			2010 Estimate			2015 Projected		
	1-mile	3-mile	5-mile	1-mile	3-mile	5-mile	1-mile	3-mile	5-mile
Age 0 - 4	5.4%	6.7%	7.0%	5.1%	6.9%	7.3%	5.0%	7.0%	7.3%
Age 5 - 9	4.7%	6.9%	7.4%	4.6%	6.3%	6.6%	4.5%	6.4%	6.7%
Age 10 - 14	4.3%	6.3%	6.9%	4.5%	5.7%	6.0%	4.4%	5.9%	6.1%
Age 15 - 19	8.2%	6.8%	6.8%	8.3%	6.8%	6.9%	8.0%	6.0%	6.0%
Age 20 - 24	11.5%	9.1%	8.2%	10.8%	9.1%	8.4%	10.9%	9.1%	8.4%
Age 25 - 34	17.8%	17.2%	16.1%	15.5%	16.7%	16.0%	16.1%	16.9%	16.4%
Age 35 - 44	14.6%	14.3%	14.5%	13.6%	13.1%	12.9%	12.4%	12.7%	12.7%
Age 45 - 54	11.9%	12.6%	12.6%	13.4%	12.6%	12.7%	12.6%	12.0%	11.8%
Age 55 - 64	5.6%	7.4%	7.6%	10.8%	10.6%	10.6%	11.2%	10.6%	10.9%
Age 65 - 74	6.8%	5.8%	6.1%	6.1%	5.8%	6.0%	8.5%	7.4%	7.5%
Age 75 - 84	6.7%	5.0%	5.0%	4.6%	4.0%	4.3%	4.1%	3.8%	4.0%
Age 85+	2.5%	1.9%	1.8%	2.8%	2.3%	2.3%	2.4%	2.2%	2.2%
Total	12,037	146,453	366,741	12,663	151,774	380,082	12,931	154,024	385,555

Source: STDB.com

Additionally, as illustrated in Figure 19, the largest segment of the population for 2010 was between the age of 25 and 34 and, according to the U.S. Census Bureau, is forecast to remain the largest segment through 2015.

Figure 19 - Competitive Submarket Population Distribution



Source: STDB.com

As of 2010, total housing units grew to 5,842, 68,125, and 163,047 at the 1-, 3-, and 5-mile intervals respectively. These figures represent a respective 7.2, 4.3, and 4.4 percent increase from 2000. The U.S. Census Bureau forecasts that by 2015, total housing units will grow in each interval by 3.1, 2.4, and 2.5 percent. Again, any redevelopment project of the SMUD site will likely have a noticeable positive effect in these figures. Table 4 illustrates the breakdown of owner occupied, renter occupied, and vacant housing units for 2000, 2010, and 2015 for each interval.

Table 4 - Competitive Submarket Housing Distribution

	Census			Estimate			Projected		
	1-mile	3-mile	5-mile	1-mile	3-mile	5-mile	1-mile	3-mile	5-mile
Owner Occupied Housing Units	48.9%	43.3%	43.8%	45.7%	39.7%	39.9%	45.1%	38.7%	38.8%
Renter Occupied Housing Units	47.5%	51.3%	50.6%	49.0%	53.3%	52.7%	48.9%	53.2%	52.6%
Vacant Housing Units	3.6%	5.3%	5.5%	5.3%	7.1%	7.4%	6.1%	8.2%	8.6%
Total Housing Units	5,423	65,220	155,816	5,842	68,125	163,047	6,031	69,784	167,142

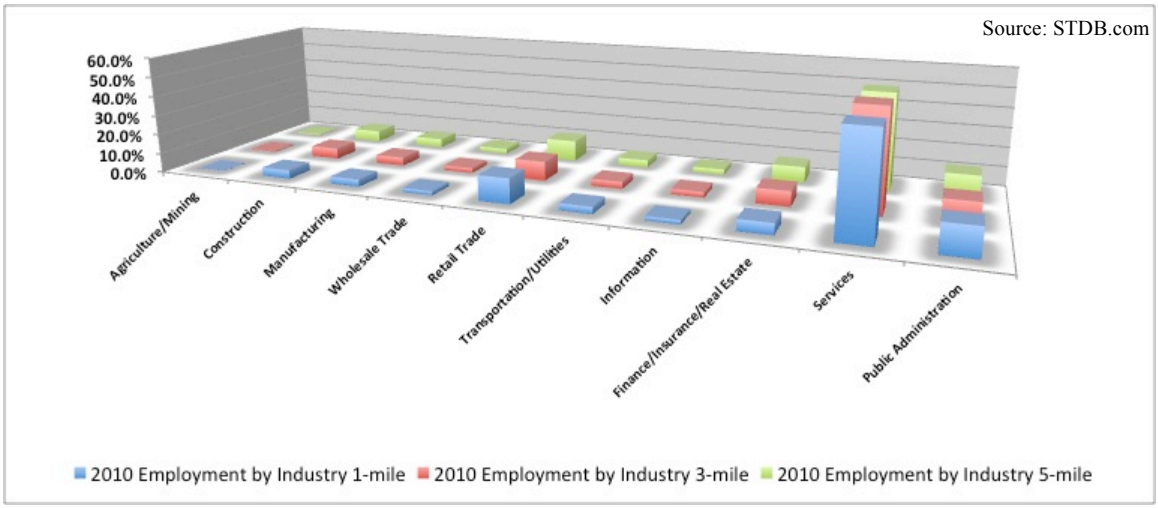
Source: STDB.com

Employment

As of 2010, the unemployment percentage rate at the 1-, 3-, and 5-mile interval was 13.9, 16.3, and 16.9, respectively. The California Employment Development Department projects the rate to be 11.6, 13.7, and 14.3 at the same respective intervals in 2015. The rate is greater at the 3- and 5-mile interval as some of neighborhoods north and south of the SMUD site have had traditionally lower-income, less-educated populations.

Looking at Figure 20, observing employment by industry, of the total employed population over 16 years of age at the 1-, 3-, and 5-mile interval, a majority (51.3, 51.4, and 49.3 percent, respectively) works in the services industry.

Figure 20 - Competitive Submarket Employment by Industry



Income

As of 2010, average household income was $56,146, $57,793, and $56,239 for the 1-, 3-, and 5-mile intervals which represented a 22.8, 15.6, and 14.8 percent increase from 2000 respectively. The U.S. Census Bureau projects average household income at each interval to grow by 12.8, 12.6, and 12.4 percent, respectively, between 2010 and 2015. Table 5 illustrates the household income distribution for each interval for 2000, 2010, and 2015. Observing these data, the U.S. Census Bureau projects the largest income segment for all intervals in 2015 to be $50,000 to $74,999 which is also the largest segment reflected in the MSA as well.

Table 5 - Competitive Submarket Household Income Distribution

	Household Income Distribution								
	2000 Census			2010 Estimate			2015 Projection		
	1-mile	3-mile	5-mile	1-mile	3-mile	5-mile	1-mile	3-mile	5-mile
< $15,000	21.8%	19.9%	21.0%	13.2%	14.6%	15.8%	10.9%	12.3%	13.5%
$15,000 - $24,999	13.9%	14.8%	15.0%	13.1%	12.3%	12.8%	10.9%	10.5%	11.1%
$25,000 - $34,999	14.2%	13.9%	13.9%	8.5%	10.7%	10.9%	6.8%	8.8%	9.0%
$35,000 - $49,999	18.3%	16.8%	16.5%	18.4%	17.0%	17.0%	15.3%	14.6%	14.4%
$50,000 - $74,999	17.6%	17.6%	17.0%	23.9%	21.3%	20.6%	25.9%	22.7%	22.3%
$75,000 - $99,999	6.8%	7.5%	7.4%	11.6%	12.0%	11.5%	13.9%	14.2%	13.6%
$100,000 - $149,999	6.3%	6.3%	6.1%	8.1%	7.7%	7.4%	11.7%	10.9%	10.5%
$150,000 - $199,999	0.7%	1.6%	1.5%	2.2%	2.3%	2.1%	3.2%	3.1%	2.9%
$200,000 +	0.5%	1.6%	1.6%	1.0%	2.1%	2.0%	1.4%	2.8%	2.7%
Average Household Income	$43,353	$48,697	$47,914	$56,146	$57,703	$56,239	$64,378	$66,024	$64,230

Source: stdb.com

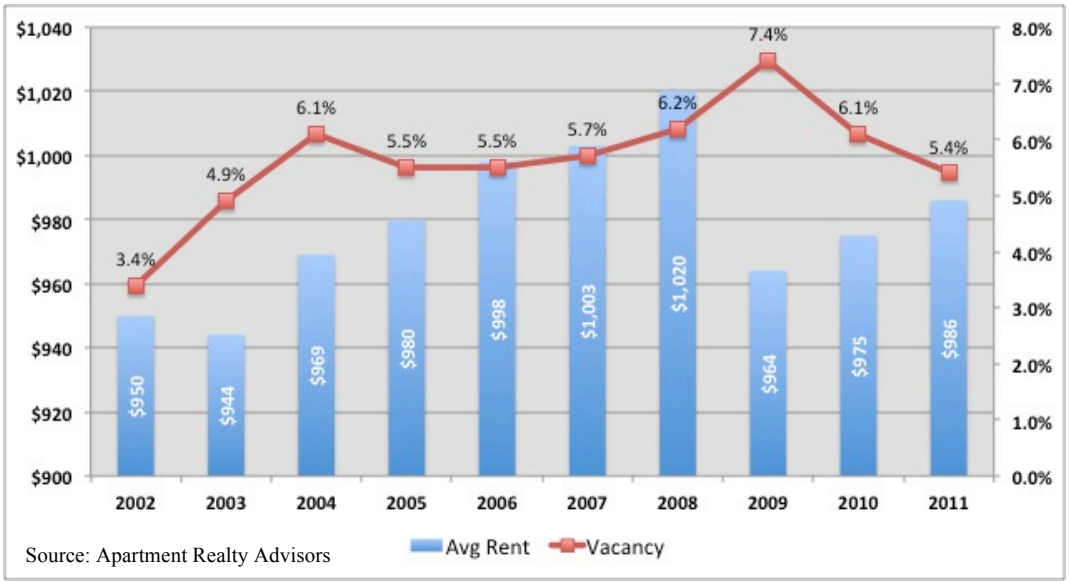
Multifamily Market

Determinations of the physical, locational, and economic factors that distinguish the SMUD site from its competition offer micro level data that defend analysis assumptions. To determine these factors I will identify the regional and primary market historical rent and vacancy rates, new development figures, and sales transaction trends.

Rent and Vacancy

The Sacramento Region most recently witnessed some of the largest rent declines and highest vacancy rates it has seen since 2002. Observing Figure 21, 2009 represented a sharp peak in vacancy and decline in average rental rate from the previous seven years.

Figure 21 - Sacramento Region Historical Rent vs. Vacancy

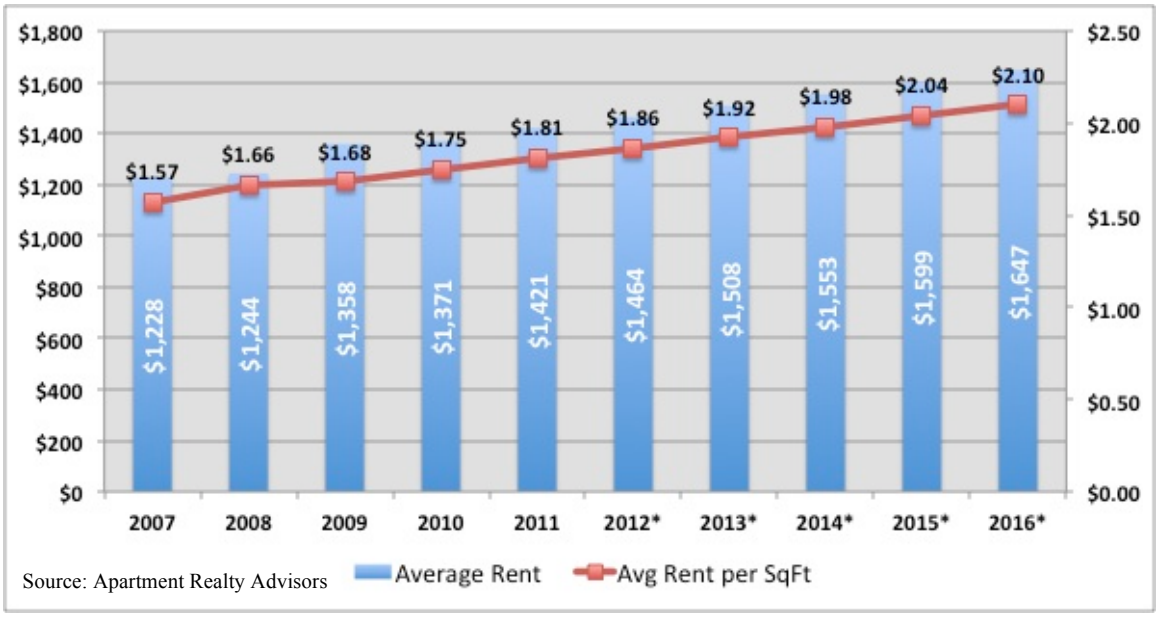


While the previous rise in vacancy is evident from 2002 to 2004, average rental rates increased moderately indicating that there was still strength in the multifamily market. I attribute much of the decline in the rental market from 2008 to 2009 to consecutive years of rental rate growth despite relatively flat household incomes. When the residential rental market crashed in 2008, a steep correction was necessary to bring rental rates and vacancy more aligned with historical levels. After this steep correction it is evident that rental rates have shown a moderate upward movement and vacancy levels have steadily declined. REIS, Inc., one of the nation's leading commercial real estate information providers, projects that the Sacramento Region will see overall rent growth of 3 to 5 percent from 2012 to 2014 with vacancy levels near 5 percent. These figures represent what market experts consider a healthy market.

The SMUD site is located in the Urban Core submarket of the Greater Sacramento Region. This submarket has historically shown to have lower vacancy rates

and higher average rents than that of the Greater Sacramento Region because of the lack of new supply and high desirability from renters. Observing Figure 22, the average rent is substantially higher than that of the Greater Sacramento Region and didn't witness the same decrease in average rents from 2007 to 2008.

Figure 22 - Urban Core Submarket Historical Average Rent



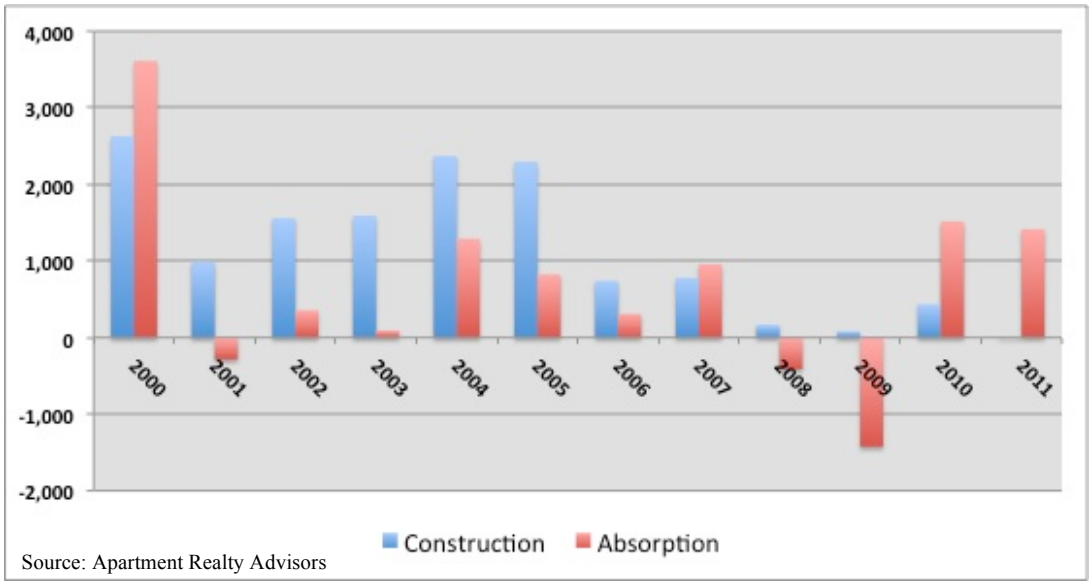
Additionally, Apartment Realty Advisors forecasts 3 percent annual rent increases through 2016 for the Urban Core submarket based on the average increases from 2007 to 2011

New Development

New development is an important market indicator as it increases the overall supply of multifamily units in the overall marketplace. New development is healthy for a growing market assuming that new units get absorbed and don't lead to an increase in overall vacancy. Net absorption, or the total number of units absorbed relative to total

supply, is also a critical measurement in forecasting the pace at which units will be absorbed in a new development project. Observing Figure 23, the region witnessed positive net absorption from 2002 to 2007 followed by two years of negative absorption from 2008 to 2009.

Figure 23 - Sacramento Region Multifamily Construction vs. Absorption



Source: Apartment Realty Advisors

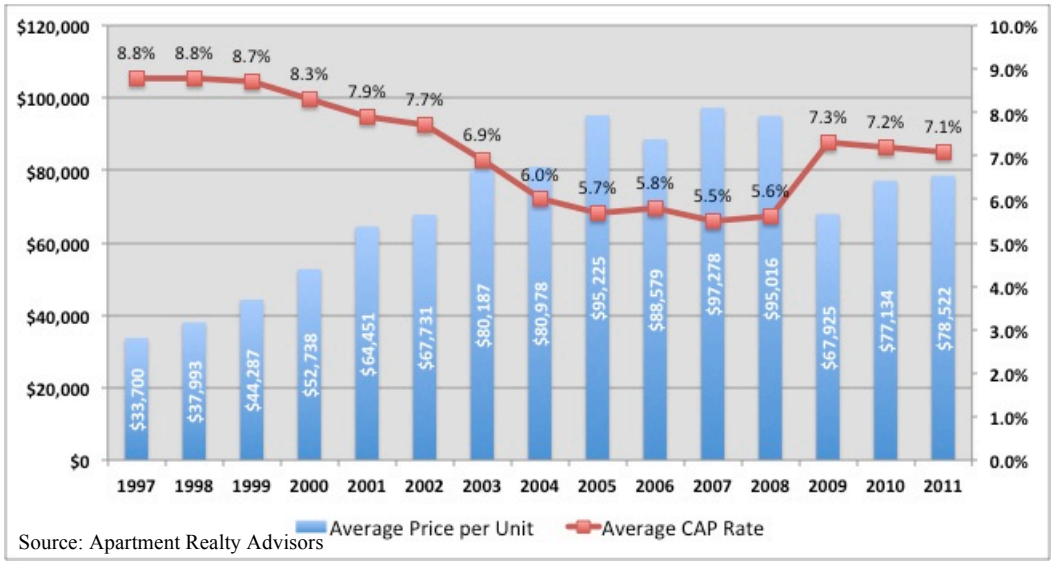
While new construction was minimal, net absorption was positive for both 2010 and 2011. REIS, Inc. forecasts net absorption to remain positive over the next several years as few new developments come to market. Actual absorption rates for specific new projects will be difficult to estimate as a lack of recent new development activity has led to little historical data. With minimal new construction however, a well-located new project will benefit from pent up renter demand searching for newer and more desirable product.

Sales Transactions

An important consideration in financial feasibility is the estimated value of the completed project. The most common form of property valuation in the United States applies a capitalization rate (cap rate) to a property's income stream (Miles et al., 2007). In this cap rate approach, a property's net operating income (NOI, or the property income stream after operating expenses have been paid) is divided by the cap rate to derive value. Determining a market cap rate to apply to my redevelopment concept's projected NOI, I must observe current and historical cap rate trends for the region. I must also observe current and historical price per unit trends. This price per unit value indicator represents more of an intrinsic value benchmark and when observed in addition to cap rate, provides a solid understanding of the investment market for me to forecast projected value.

Figure 24 illustrates the historical trend of cap rate and price per unit for the Sacramento Region from 1997 to 2011.

Figure 24 - Sacramento Region Historical Multifamily Price per Unit vs. Cap Rate



Source: Apartment Realty Advisors

Capital Markets

Real estate development typically involves a series of financing arrangements depending on a project's stage in the development process. Considering the scale, existing condition, and foreseeable issues associated with the subject property, my redevelopment concept will require some combination of financial leverage. Therefore, an analysis of the capital markets is necessary to forecast financing costs in financial feasibility.

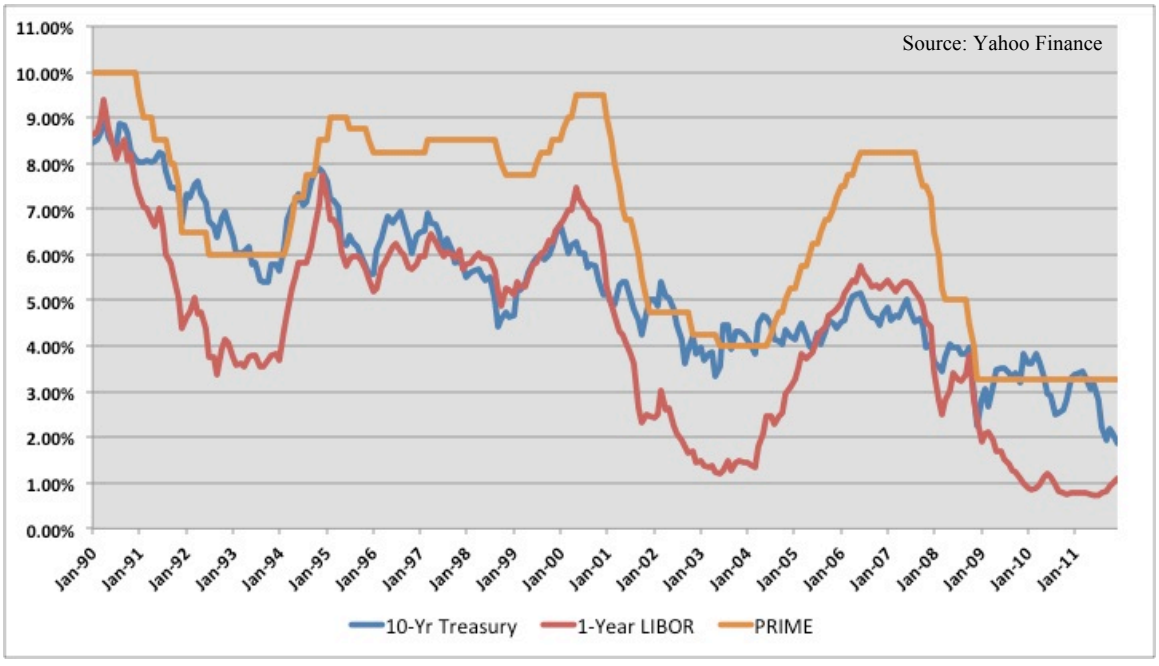
Redevelopment of the subject property will involve many stages: demolition, toxic remediation, rezoning, conceptual design, environmental studies, physical construction, marketing, and finally, management. Each of these stages brings its own set of inherent risks. As a project progresses through the development stages, its investment risk generally diminishes. Therefore, the interest rates and rates of return required by lenders decrease as the development progresses. Generally speaking, redevelopment projects in the early stages of development are the riskiest investment stage for lenders and developers for two reasons (Miles et al., 2007). First, any positive cash flow from rental income is one or more years in the future. Second, the probability of project completion only increases with each subsequent stage of development.

The interest rates lenders charge in consideration for lending funds is typically tied to money market index rates with varying maturities based on the perceived risk of a project. For example, early stage development financing is typically tied to short-term rates while permanent financing is typically tied to moderate- to long-term rates. Therefore, observation of historical trends associated with typical short- and long-term

money market index rates is essential to forecast financing costs for my redevelopment concept.

Figure 25 illustrates three primary money market index rates that lenders typically use as a base for their risk premium at different stages of development. Interest rates have dropped considerably since the U.S. economy entered a recession in 2007 just as they did in 2001 during the dot-com bust and the Recession of the early 1990s. While interest rates recovered sharply following the previous declines, the current recession is lasting longer, keeping rates low and prolonging a recovery to previous highs. The U.S. and Greater Sacramento economy have recently shown slight signs of recovery and a moderate rise in short-term rates is apparent, however, investors remain cautious, which is evident in the relative flatness in long-term rates.

Figure 25 - Historical Index Rate Trend



Concluding Market Trends

After observing the historical data, a variety of themes emerge. First, the distribution of age clearly indicates that the largest segment of the MSA population falls between 25 and 64. In the competitive submarket the largest segment of the population falls between 20 and 64 with a high concentration of 20 to 34 year olds. This circumstance indicates that the SMUD site's immediate neighborhood has a higher concentration of young adults than that of the Greater Sacramento region. Overall, a high concentration of 20 to 34 year olds is a positive sign for multifamily properties as this age segment represents the peak renter demographic. Because my redevelopment concept is a few years from completion, observing the historical age distribution trends indicate that the largest segment of the population in the near future will likely fall between 25 and 34.

Second, data showing the percent of the population in the competitive submarket indicates that a larger segment of that population opts for rental housing as opposed to home ownership. This trend, also evident on a national scale, has many housing experts convinced that the multifamily market is on the cusp of a historic boom (Shaver & Wood, 2012). With many consumers neither qualifying for nor interested in real estate investments, some observers suggest that a permanent shift toward renting has occurred in the American psyche. Florida (2010) suggests that mobility and flexibility are key principles of the modern economy, both of which home ownership limit. Accordingly, the simple fact remains that in a bad economy, people must make whatever changes necessary to improve their situation, especially if they've lost their jobs. Sometimes this circumstance might mean moving to another city where there is more opportunity, and if

an individual is tied to a mortgage, one doesn't have the same ease of mobility as one does if you rent. Culkin (2012) states that "today's first-time renters, referred to as Millennials (ages 18 to 34), are making their housing decisions based on learning from mistakes made by their parents and friends." Much of this rent versus own dichotomy discussion will continue as the U.S. economy strengthens, however, I forecast stable renter demand in and around the subject property now and for years to come.

A third theme underscores the relationship between household incomes and employment. A majority of the population, both in the Greater Sacramento region and the competitive submarket, has white collar jobs which tend to correlate with higher levels of income. This income correlation is evident when observing that the largest income segment in both the competitive submarket and MSA are households with incomes between $50,000 and $74,999. While the current level of unemployment in the region remains at a historical high, other regional MSAs have shown signs of improving employment conditions which should bode well for the Sacramento region seeing as historical data suggests that the Sacramento region lags other MSAs in terms of employment.

Fourth, the rental market in and around Sacramento appears to be relatively stable after a steep correction following the housing bust of 2008. More importantly, the Urban Core rental submarket has shown positive growth despite the stagnant regional economy. With a lack of new development and positive absorption, this positive trend should remain evident in coming years.

A fifth theme suggests that multifamily property values have corrected to a level more aligned with historical norms. The Sacramento region has historically been a cash-flow market as opposed to an appreciation market. Therefore, values have historically shown modest growth while cap rates have shown modest compression. While this trend wasn't the case during the unprecedented boom years of the 2000s, it appears to have corrected to a stable level and I predict a return to historical values and cap rates.

And finally, while the capital markets have yet to indicate any substantial rise in short- and long-term interest rates, it is likely that rates will rise over the coming years. I predict a modest rise in interest rates as the U.S. economy improves and the U.S. government focuses on limiting inflation. As my redevelopment concept evolves into reality, the capital markets are likely to see an incremental increase in financing costs as compared with today's rates.

Chapter 4

REDEVELOPMENT CONCEPT

Real estate development is both an art and a science. The science involves observing background information, gathering and interpreting market data, and making future predictions based on the known facts. The art involves creative thinking on part of the developer to design a tangible project that meets a market need. This chapter will introduce my redevelopment concept for the SMUD site based on the information and data gathered in Chapters 2 and 3. By first identifying a specific target market for future renters, I will develop a concept design that reflects the individual circumstances of the SMUD site as well as one that keeps sight of future market trends. Drawing on examples from comparable existing development projects, I will implement specific design elements as well as best practices learned during the development of other similar projects.

Target Market

After determining the larger market, a developer must narrow it down to a target market. Identifying the target market is critical in that it provides guidance in project design. Different segments of the population have different preferences, so the more precise the target market determination is, the more certain a developer can be that specific design elements will be appropriate.

After observing the background information and examining the market data, I would like to design a project that primarily targets the peak renter segment, commonly referred to as Generation Y, Echo Boomers, or Millennials (I define as those born

between 1982 and 1995). However, capitalizing on what Shaver & Wood (2012) call a "fundamental change in American housing preferences," I also want to design a concept that appeals to a broad range of affluent individuals who have made a lifestyle choice to rent rather than own a suburban single-family home. These individuals can vary widely in age from early 20s to empty nesters seeking a more active and diverse lifestyle provided by the SMUD site's close proximity to downtown, midtown, and East Sacramento. Additionally, the SMUD site's location should attract individuals within this segment whose workplaces are located in downtown, midtown, or even the U.S. Highway 50 corridor, all major white collar employment centers.

Another key segment evident from my observation of regional educational attainment statistics are both undergraduate and graduate students enrolled at the nearby California State University, Sacramento and University of the Pacific, McGeorge School of Law which are both located within one mile of the SMUD site. While this segment can't be the primary target market, as individuals in college traditionally have lower levels of income, ignoring this segment will likely have negative impacts on the project's overall renter demand.

The common denominator among my target market segments is going to be a moderate level of affluence. The target market for my redevelopment concept will have to have a certain level of income or financial resources in order to afford the type of project I am proposing. Observing the income data provided in Chapter 3, I am confident that creative thinking in terms of product positioning and concept design will meet projected supply and demand.

Concept Design

Good design has never been more important than it is today considering the competitive rental market, constantly changing consumer preferences, and environmentally sensitive community stakeholders. Miles et al. (2007) describe design as a versatile method of establishing contact with and discriminating between specific market segments. With a multifamily property, specific design elements communicate directly with potential tenants as well as the surrounding community. Therefore, the development team must take into account the project's target market as well as the desires of community stakeholders when considering concept design.

Design encompasses many interrelated elements. For my redevelopment concept I identify five primary design elements that, when combined, should produce a successful product that meets the needs and expectations of its intended target market as well as the overall community it's located in. The five primary design elements I will focus on are construction style, amenities, unit mix and style, site plan, and architecture. To assist in explaining specific features I would like to incorporate into my redevelopment concept, I will use illustrations of other comparable projects to provide visual examples of specific design features for each of these design elements. Observing comparable projects will also guide development cost assumptions in the following chapter as itemized development costs fall outside the scope of this project.

Construction Style

The first important design element to consider is the construction style of the buildings. Taking into consideration the size and atypical shape of the SMUD site as well

as the surrounding land uses, I am proposing a garden-style apartment project. Garden-style refers to the style of construction characterized by multiple buildings of one- to four-stories tall that contain no internal hallways, meaning residents enter their apartment units from a common stairwell or patio. Additionally, garden-style buildings are typically surrounded by outdoor landscaping, patios, parking, and open space. A prime example of this style of construction is illustrated in Figure 26.

Figure 26 - Example of Garden-Style Construction

Garden-style construction will be the most appropriate style of construction for a few reasons. First, this style will provide the height and density of buildings appropriate for the surrounding community, which is made up primarily of single-family homes. Second, this type of construction is substantially less expensive than other apartment construction styles, such as podium or wrap, in which buildings are built on top of or

surrounding multiple level parking. While these other construction styles provide for much higher densities, at approximately 20 acres, such construction wouldn't fit the character of the SMUD site as well as garden-style would. And third, garden-style will allow for the creation of substantial open space common areas, which is a key preference of my target market.

Unit Mix and Style

Unit mix describes the type and number of floor plans that make up an apartment community while style describes interior unit design. First, a developer must apply careful consideration when deciding on the appropriate unit mix for a project. While a site's physical characteristics dictate some of what unit mix is possible in terms of size and number constraints, the project's target market plays the most vital role. The target market for my redevelopment concept, while similarly educated and affluent, is wide-reaching and diverse when it comes to living preferences. For example, a single young professional, young couple married with no kids, empty nest baby boomers, small families, and college students all have different living space preferences. Therefore, the unit mix for my concept will need to offer the appropriate mix of floor plans to coincide with the diverse demands of my future renters.

To offer an appropriate mix of floor plans, my redevelopment concept will be comprised of a varying mix of one and two bedroom floor plans as well as a small number of three bedroom floor plans. The absence of studio units is deliberate in that from my own personal experience, studio apartments are not in high demand in the Sacramento region despite their affordable price point. The reason for varying one and

two bedroom floor plans is twofold. First, the majority of my target market will require this type of living arrangement. With such a diverse set of preferences in space demands, the majority of my future renters will require varying degrees of living space beyond that of the bedroom component. Second, this diverse unit mix will provide for a mix of price points. To capture a diverse segment of the rental market, offering multiple price points will ensure strong and stable renter demand. Moreover, a property with multiple price points allows the property owner an opportunity to quickly adjust rental rates in a fluctuating market. A specific number of one and two bedroom floor plans is premature at this point in the redevelopment process, however, a future developer will need to invest resources to determine such a specific number based on a more detailed consumer preference study.

The unit mix should also include a small number of three bedroom units. Three bedroom units provide small families and those choosing roommates the opportunity for additional space. Having a small number of three bedroom units will maintain the diverse unit mix my target market requires and offer an even greater mix of price points. Three bedroom units are especially popular with roommates as some individuals in my target market may lack the financial resources to rent a one bedroom or two bedroom unit. Providing an additional room reduces rent per tenant.

In terms of interior unit design, I envision apartments that appeal to my target market's discerning tastes. Apartments will feature hard-wood flooring, modern kitchens with stainless steel appliances and granite countertops, in-home washer/dryer units, and

craftsman style finishes. Figure 27, an interior photo of a competing property, illustrates these features and details.

Figure 27 - Interior Photo Illustration

When conceiving of the unit interiors, I would urge a future developer to design units with a level of detail and finish commonly found in new for-sale condominiums. While the current investment goal of my redevelopment concept is build-to-own, a potential long-term exit strategy could be to sell the individual units as condominiums. Therefore, a developer should design and build the project as condominiums, should market conditions ever dictate such an exit-strategy.

Amenities

Amenities describe the common area features of an apartment community. Common examples include a fitness center, pool, recreation room, business center, laundry facilities, and playground. Generally speaking, the more amenities a community

has, the more likely it will gain a competitive edge over its competitors. While these advantages typically add to development cost, premium amenities is a design element that I feel will heavily contribute to the overall success of my redevelopment concept. According to Brooks et al. (2011), my target market requires a compelling living environment that includes state-of-the-art, sustainable finishes, five-star service, resort-style amenities, and social opportunities galore. Most renters won't find these resort-style amenities in and around the Urban Core rental Submarket due to land constraints, so the large size of the SMUD site is a great advantage. My redevelopment concept's main attraction will be the community clubhouse. The clubhouse will feature a recreation room that includes a full kitchen, billiards lounge, business center, and a fully-equipped fitness studio. Figures 28 and 29 illustrate these clubhouse features offered at a nearby competing property.

Figure 21 - Illustration of Clubhouse

Source: Trammel Crow Residential

Figure 29 - Illustration of Fitness Studio

Additionally, the clubhouse will feature a resort-inspired pool and outdoor lounge with fire pits similar to those illustrated in Figures 30 and 31.

Figure 30 - Illustration of Resort-Inspired Pool

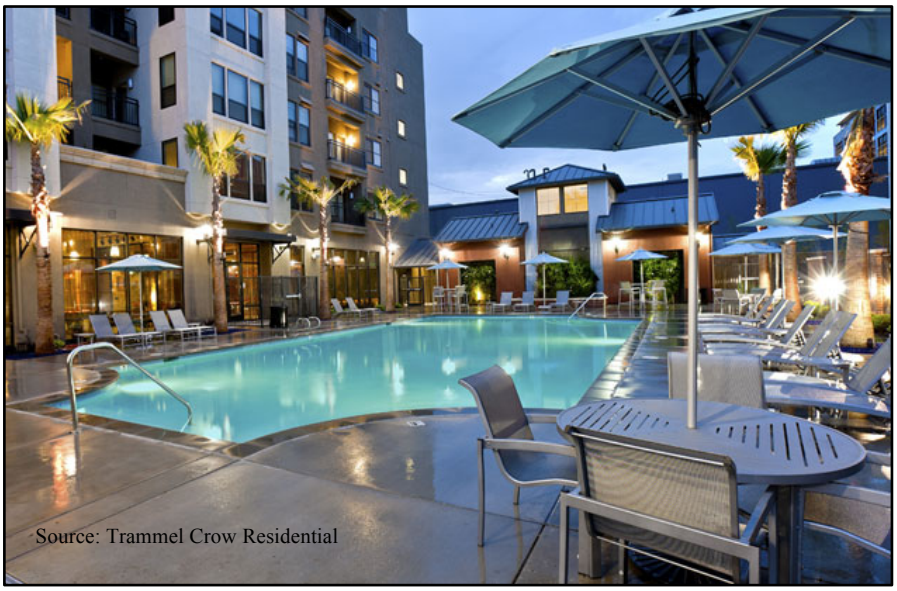


Figure 31 - Illustration of Outdoor Lounge

Another amenity to take into consideration relates to the fact that my target market is particularly partial to their pets. Schnitzer (2012) points out that communities that are not pet-friendly can say goodbye to their chances of attracting a large percentage of my target market, and those communities that do allow animals should try to incorporate features such as dog parks and runs into their offerings. Therefore, my redevelopment concept will provide ample dedicated space to cater to residents with pets, especially dogs.

Considering the SMUD site's lot size and the garden-style construction I am proposing, ample common area open space will be created. With this open space I would like to create park-like settings and courtyards with abundant landscaping, playgrounds, and sitting areas. This community feature will further promote the sense of place my redevelopment concept is trying to create and will provide residents with multiple outdoor social gathering locations.

Site Plan

A site plan describes the physical layout of the buildings, roadways, and landscaping. Typically, regional public policies and individual characteristics of the site and the surrounding land uses will dictate how a developer determines the site plan. Referring to the data I presented in Chapter 2, there are many public policies and characteristics of the SMUD site and surrounding land uses that heavily influence how my redevelopment concept should be laid out. Generally speaking, a site plan addresses the potential impacts to existing and planned adjacent land uses, thereby taking into consideration traffic, transit access, parking, circulation, safety, and resident enjoyment issues. While an actual detailed site plan drafted by an architect is outside the scope of this project, conceptually, I want to offer some general features based on my observations.

Overall, I want the site plan to fit with its surroundings and capitalize on existing community assets that make the location so desirable. These assets include the RT Gold Line tracks and 59th Street Station, as well as the abundant retail shopping and dining areas along Folsom Boulevard. To best fit with its surroundings and to incorporate these assets, the site plan has to promote walkability. Walkability is also a definitive characteristic in attracting my target market who particularly desires an urban lifestyle where most daily social activity-such as gathering, shopping, and dinning-doesn't require the use of an automobile.

According to Duany et al. (2000), site designers promote walkability through deliberate attention to building orientation, parking, vehicle and pedestrian circulation,

and visually interesting architecture (which I describe in detail in the next section). The site plan for the SMUD site will feature building orientation designed to create integrated, interesting, and safe open space areas that promote neighborly interaction. These features are created when windows, balconies, and doors along the open space, internal streets, and adjacent roadways provide “eyes on the street”, leading to a sense of security for pedestrians. With buildings featuring pedestrian access and visual orientation to adjacent roadways and open space, as illustrated in Figures 32 and 33, my site design will avoid the creation of monotonous streetscapes and nonfunctional common areas.

Figure 32 - Illustration of Buildings with Pedestrian Access Adjacent to Roadways

Source: Dylan Herrick

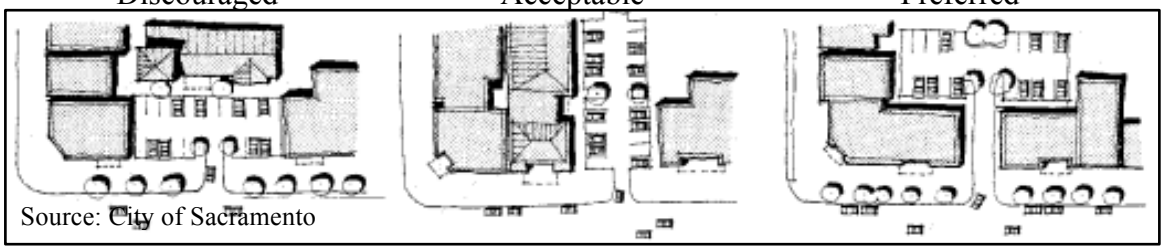
Figure 33 - Illustration of Buildings with Visual Orientation Towards Open Space

Buildings will also be located in a way that minimizes the potential for disruption to the privacy and activities of adjacent buildings. Accordingly, I would like to locate the community's clubhouse at or near the center of the site as this will be the primary social gathering point for community residents. This central location will also feature an elevated walking bridge connecting the northern and southern plots that are dissected by the RT Gold Line tracks. Furthermore, the building orientation will feature variation in both street pattern and siting of structures so the appearance of streetscape does not become overly repetitive, thereby avoiding continuous lines of buildings with the same visual orientation.

Another design method used to promote walkability places the parking areas in the back or to the side of the structures to minimize the visual prominence of vehicles and

potential pedestrian conflicts. Therefore, as illustrated in Figure 34, parking surfaces will not be visible from 59th Street or other vehicle access roadways.

Figure 34 - Illustration of Parking Scenarios



Source: City of Sacramento

Additionally, my design will feature multiple smaller parking areas located within the community that will are buffered from structures and pedestrian walkways with abundant landscaping.

Duany et al. (2000) state that planning for safer and efficient movement of vehicles and pedestrians results in an aesthetically pleasing site with less impervious surface and increased open space. Furthermore, pedestrian ingress and egress provides opportunities for increased transit use and interaction with community assets. Therefore, my site plan will provide ample pedestrian routes and entryways that are separated from vehicle routes, obvious, direct, and simple as possible. Where pedestrian and vehicle traffic must intersect, a change in surface materials and landscaping buffers will emphasize the conflict point and improve visibility.

Additionally, my redevelopment concept will feature one primary vehicle entryway, and two secondary entryways that reflect the overall architectural character of the community. The primary vehicle entryway will be located north of the RT Gold Line tracks along 59th Street and will require the addition of a signalized intersection with

dedicated left turn lane on 59th Street approaching from the south. As illustrated in Figure 35, the main entryway will feature enhanced paving, landscaping, walls, and monument signage that help define the identity of the community and create an inviting and attractive property.

Figure 35 - Illustration of Entryway Example

Source: City of Sacramento

A secondary entryway will be located south of the RT Gold Line tracks along 59th Street. This entryway will be the primary access point for vehicles and pedestrians whose apartment unit is located on the southern plot. An island will be constructed along 59th Street to prevent vehicle left turns into this entryway, as traffic will be directed to the dedicated left turn lane at the primary entryway where vehicles can make a U-turn. Based on my findings in Chapter 2, this island feature should provide a creative solution for community stakeholders who feel that the current vehicle traffic along 59th Street is

already beyond capacity. A third entryway will be located on the west side of the property, north of the RT Gold Line tracks at the termination of P or Q Streets described in Chapter 2, whichever fits the final site plan more appropriately. Nevertheless, all of the entryways will feature security access gates for resident security and to prevent non-resident vehicle traffic.

Architecture

Architecture describes the physical look of a development project. When considering the physical look of a project the primary goal of a developer is to design a project that respects the character and scale of the adjacent residential neighborhood. The SMUD site and the surrounding community of East Sacramento are, according to Simpson (2004), characterized by residential stability. A true sense of pride in the community is evident in the care and upkeep of homes and businesses and there is an abiding sense of history in the community. Therefore, the design of my redevelopment concept must evoke the same sense of place that has been evident throughout the community's long history. Community stakeholders and future residents will see my design as classic and timeless; a property that reflects a community rich in history and one that has evolved over a long period of time. Many of the single-family homes in East Sacramento feature a variety of different architectural elements that provide visual interest. Therefore, similar to the design illustrated in Figure 36, a multifamily property in East Sacramento, my concept will feature buildings that add interest and character reflected in the adjacent residential neighborhood.

Figure 36 - Photo of Alexan Apartments - East Sacramento

Noticeable architectural details include layered landscaping, enclosed balconies, front porches with posts or columns, varied roof form and shape, and a variety of building materials; all architectural elements found in the surrounding community. These visually interesting features also add significantly to the overall walkability of the project.

Based on my observations in Chapter 2, my redevelopment concept will also need to be compatible with the surrounding neighborhood with respect to scale. Considering the prominence of single-family homes adjacent to the SMUD site, buildings in my redevelopment concept will feature a scale transition from the edge of the property to the center. Buildings located at the edge of the site will be stepped down at upper levels to provide the illusion of lower building height and less intense density. This feature will appropriately transition the scale of single-family homes to a much higher density of

multifamily residences. Observing Figure 37, architects step down upper building levels by varying rooflines, and strategically placing other details such as balconies, windows, and chimneys.

Figure 37 - Architect's Illustration of Building Upper Level Step Down

Source: City of Sacramento

Chapter 5

FEASIBILITY ANALYSIS

The next step in the real estate development process after refinement of the idea, according to Miles et al. (2007), is to translate all the collected information, market trends, and ideas into a framework to test the proposed project's viability. Testing viability is subjective in nature in that every developer has different investment criteria and goals that fit their own individual set of circumstances. In the case of my redevelopment concept, I am proposing a long-term "hold" investment in which the developer builds the project and then manages the property with no immediate plans for a sale. Therefore, my feasibility analysis will focus on testing the viability of a long-term investment strategy. However, through sensitivity analysis, I will also determine if a "hold" investment is best or whether a developer should sell the asset once the property is leased-up and operations are stabilized.

Methodology

My feasibility analysis refers to both the physical and financial feasibility of my redevelopment concept. Physical feasibility determines the size of the proposed project as it relates to site characteristics and legal requirements. Developers use financial feasibility to test the viability of a project based on varying investment criteria and commonly to determine the price they are willing to pay for the land. In this chapter I will determine my redevelopment concept's physical feasibility based on the information gathered in Chapter 2, and then conduct financial feasibility using assumptions based on

the information gathered in Chapter 3 as well as project characteristics presented in Chapter 4.

Physical Feasibility

The goal of my physical feasibility analysis is to determine whether a multifamily project can be built on the SMUD site in accordance with regulatory requirements. Recalling the information I presented in Chapter 2, my redevelopment concept will require a new land use designation through a General Plan Amendment to allow for a multifamily property. This new designation will be Traditional Neighborhood High Density, which provides for multifamily housing in well-established areas served by major transportation routes and facilities, and that are also near abundant retail shopping areas. According to the Sacramento General Plan, this land use designation reflects development standards, or legal standards of building density stated as the allowable range of dwelling units per net acre, indicating a minimum building density of 18 dwelling units per acre and maximum building density of 36 dwelling units per acre.

Once the City of Sacramento approves of the General Plan Amendment for a new land use designation, I am proposing merging all of the individual parcels into one parcel zoned R3, which is a multi-family residential zone intended for traditional types of apartments, such as garden style construction. According to City of Sacramento Zoning Ordinance, this zone is for parcels located outside the central business district serving as a residential buffer along major streets and shopping centers and reflects development standards allowing for a maximum of 30 dwelling units per acre or 1 dwelling unit for every 1,450 square feet of land, whichever is less. Table 6 illustrates the calculation of

maximum allowed dwelling units based on each criteria of land measurement per the City of Sacramento zoning code for R3.

Table 6 - Maximum Dwelling Unit Calculation

Criteria	Land Measurement	Total Number of Units Allowed
30 Units Per Acre	19.51 Acres	585.3
1 Unit Per 1,450 Square Feet	849,970 Square Feet	586.2
Source: Dylan Herrick		

While the maximum number of allowed dwelling units is approximately 585 units based on City of Sacramento zoning code, because of the atypical shape of the SMUD site and building height scaling characteristics of my redevelopment concept, I estimate a 10 percent decrease resulting in a total of 526 units.

Like all zoning designations, the R3 zone lists specific requirements for parking, building setback,[14] pedestrian circulation,[15] open space,[16] building height restriction, and lot coverage. City of Sacramento zoning code lists these specific requirements so that city planners can review proposed development site plans and cross examine the architectural drawings with specific zoning code requirements. Because an actual site plan is beyond the scope of this project, I contacted the City of Sacramento Planning Department for suggestions on how to estimate these figures for my redevelopment concept. According to Greg Sandlund, an Associate Planner with the City of Sacramento Planning Department, an R3 designation for the SMUD site should allow for 15 percent setback requirements, 15 percent for circulation requirements, and 2.5 acres for open space

[14] A building setback is defined as the minimum allowable horizontal distance from a given point or line of reference, such as a street right-of-way or property line, to the nearest point of a foundation or supporting post or pillar of any applicable structure.
[15] Circulation refers to the way people move through and interact with buildings.
[16] Open space refers to the areas within a project such as grass area, playground, and other common areas with no buildings.

requirements. Table 7 illustrates the calculation of required square feet for setback, circulation, and open space requirements based on the total square feet of the SMUD site.

Table 7 - Area Available for Development

	Square Feet
Gross Land Area	849,970
Less:	
Setbacks (15%)	(127,496)
Circulation (15%)	(127,496)
Open Space (2.5 Acres)	(108,900)
Area Available for Development	486,079
Source: Dylan Herrick	

With regards to parking, the zoning code requires 1.5 spaces per dwelling unit and 1 guest space for every 15 dwelling units, with each parking space requiring approximately 340 square feet of land when taking into account width, depth, and maneuvering width. Table 8 illustrates the calculation of parking spaces and corresponding surface square feet required for my redevelopment concept based on 526 dwelling units.

Table 8 - Parking Surface Requirement

Criteria	Total Number of Spaces Required	Total Square Feet Required
1.5 Parking Spaces per Dwelling Unit	789	268,260
1 Guest Space per 15 Dwelling Units	35	11,900
TOTAL	824	280,160
Source: Dylan Herrick		

Using an average unit size of 950 square feet,[17] an estimated 30,000 square feet for the proposed clubhouse and other common area structures, the figures obtained from Table 7 and 8, and noting that R3 zoning restricts building height to 35 feet, or 3 stories, Table 9 illustrates the physical feasibility of my redevelopment concept for the SMUD site.

[17] Based on my redevelopment concept's proposed unit mix, I'm using 950 square feet as an average unit size. This figure is comparable to other recent multifamily development projects with similar unit mix characteristics.

Table 9 - Physical Feasibility for SMUD Site

	Square Feet
Area Available for Development	486,079
Less:	
Net Surface Area for Parking	(280,160)
Net Surface Area Available for Structures	205,919
Less:	
Proposed Total Footprint of Buildings (526 units x 950 sq.ft. avg. per Unit) ÷ 3 Stories	(166,567)
Proposed Clubhouse	(30,000)
Excess or (Deficency) Over Zoning Regulations	9,352
Source: Dylan Herrick	

Based on my calculations in Table 9, it appears that the SMUD site can accommodate a 526 unit multifamily project and comply with City of Sacramento zoning requirements. The final test of physical viability is to determine whether or not my redevelopment concept falls within the R3 zoning restriction that physical structures cover less than 50 percent of the entire lot. This maximum lot coverage restriction also takes into consideration any covered parking. For my redevelopment concept I am proposing one covered parking spot per unit[18], which equates to 526 covered parking spaces requiring 75,744 square feet of lot coverage.[19] The figures in Table 10 indicate that my redevelopment concept is clearly within the City of Sacramento's lot coverage restriction.

[18] Units will be allocated one assigned covered parking space with the remaining uncovered parking spots being unassigned. Competitive apartment communities are not currently charging for additional parking spots per unit but this circumstance could change in the future at which point my redevelopment concept could produce additional revenue.
[19] Using a standard parking stall of 8 feet by 18 feet multiplied by 526 spaces.

Table 10 - Lot Coverage Calculation

	Square Feet
Gross Land Area	849,970
Maximum Lot Coverage of 50%	424,985
Less:	
Total Footprint of Buildings	(166,567)
Clubhouse	(30,000)
Carports	(75,744)
Excess or (Deficency) Over Zoning Regulations	152,674

Source: Dylan Herrick

Financial Feasibility

The goal of my financial feasibility is to provide a preliminary development plan analysis to determine whether a multifamily project can be built on the SMUD site considering development costs, operating projections, and investment criteria. A corollary goal is to determine a fair land acquisition price to purchase the property from SMUD. Miles et al. (2007) assert that an ongoing function during project feasibility is translating all of the collected information (background and market data) into a framework that relates potential risks and rewards to the developer's objectives. As noted earlier, my investment objective is to develop the SMUD site and then operate the newly constructed property as a long-term "hold" investment. To determine the financial viability of my redevelopment concept I need to first make assumptions on potential development costs, estimate a market value for the finished product, and finally test the project's viability through sensitivity analysis.

Development Cost

Development cost includes a variety of elements that fit easily into cost categories. While each development project will have features specific to it, typical

development costs include land acquisition, infrastructure, site preparation, design fees, permitting, financing, marketing, legal and accounting fees, and physical construction. At the current stage of the development process for the SMUD site, it is difficult to estimate exact figures for these development costs. Considering that the property is still in use by the current property owner, no architectural drawings have been drafted, no development timeline has been determined, and no property inspections have been completed by a developer, I will need to draw upon the historical costs of recent comparable projects. Therefore, observing recent projects of similar characteristics to that of my redevelopment concept will be sufficient to predict potential costs for financial feasibility. As the development process progresses, a developer will fine tune these estimates with more certainty. Table 11 identifies comparable infill development project costs[20] on a cost per unit basis and indicates the development costs I estimate for my redevelopment of the SMUD site.

Table 11 - Comparable Project Development Costs

Project	Location	Year Completed	Number of Units	Constructiopn Cost	Cost per Unit	Construction Style
Alexan Midtown	Sacramento, CA	2010	275	$48,000,000	$174,545	Wrap
The Element	Sacramento, CA	2008	288	$31,000,000	$107,639	Garden
Wolf Ranch	Elk Grove, CA	2010	160	$22,500,000	$140,625	Garden
Highlands Point	San Ramon, CA	2012	293	$57,000,000	$194,539	Garden
N/A	San Jose, CA	2013*	275	$62,000,000	$225,455	Podium
Vintage at Laguna II	Elk Grove, CA	2013*	69	$13,600,000	$197,101	Garden
SMUD Site	Sacramento, CA	2016*	526	$84,000,000	$159,696	Garden

*Projected

Source: Dylan Herrick

I estimate development costs of approximately $160,000 per unit, or total construction cost of $84,000,000 based on the specific characteristics of my redevelopment concept,

[20] I gathered comparable infill development costs through an Internet search and a phone conversation with a Peter Geremia of St. Anton Partners who has developed similar urban-infill multifamily projects throughout northern California.

which include craftsman architecture, luxury amenities, and extensive site preparation. While some other comparable projects appear to have a higher development cost per unit, at 526 units, my redevelopment concept is sure to benefit from greater economies of scale.

Land Acquisition Cost

A concurrent purpose to my project is to determine what price a developer pursuing my redevelopment concept would be willing to pay SMUD for acquisition of the site. Keeping in mind that the land acquisition cost will be included in the total development cost of $84,000,000, and that a developer will finance a substantial portion of that cost with construction financing, I need to determine what portion of the $84,000,000 can be allocated for the acquisition of the site. Assuming a construction lender will provide 75 percent loan-to-cost of the total development cost, a shortfall of $21,000,000 will need to be provided in the form of developer equity. I propose offering SMUD 50 percent of this required developer equity, or $10,500,000 ($538,186 per acre), for the acquisition of the land. Based on my own personal experience, this price is well within the comparable range of other urban infill sites sold to developers over the last decade. However, because of the complex nature of the SMUD site (i.e. potential environmental contamination and substantial demolition) and the associated risks involved with redevelopment, I propose that SMUD provide a developer with financing for the land acquisition in the form of a purchase money mortgage. Essentially, a developer will pay SMUD a premium, in the form of interest, in consideration for a delayed payment of the land purchase price.

SMUD's acceptance of this type of offer still remains uncertain, however, considering the characteristics and risks associated with the SMUD site, it would be unlikely that any developer would purchase the site outright. Typically, when a site requires substantial demolition and possible environmental cleanup, purchase money mortgage financing by the seller is the preferred (or even the only) type of financing available. With SMUD financing the land acquisition, it is essentially sharing redevelopment risk with a developer. A developer will still need to provide $10,500,000 in personal equity for development costs while SMUD simply collects interest on a delayed purchase price payment. With construction financing, however, the SMUD land acquisition loan would be in a subordinate lien position, meaning that the construction lender would receive all property liquidation proceeds until the loan was repaid in full. While the subordinate loan position makes this type of offer riskier for SMUD, considering the current condition of the site, SMUD would only be risking its future price of the land. I assume that SMUD will be willing to share this risk considering that the future price of its land is positively correlated with the success of any future redevelopment. Therefore, SMUD will want to sell its site to an experienced and successful developer who provides the highest probability of a successful redevelopment.

Projected Market Value

A projected market value is needed in order to effectively test my redevelopment concepts viability through financial analysis. Once a project is constructed, leased-up, and stabilized, a developer will sell the property or refinance to pay off the construction loan and SMUD. This new permanent loan will be based on the market value of the

property at the time of refinance. To determine market value for my redevelopment concept, I need to estimate the property's projected Net Operating Income or NOI. NOI is estimated by projecting Effective Gross Income, or EGI, and annual operating expenses. EGI will represent the monthly rental income paid by tenants less vacancy and concession loss[21] while annual operating expenses will include the many fixed[22] and variable costs[23] of maintaining a multifamily property. Keeping in mind that the redevelopment of the SMUD site isn't likely to occur until sometime after 2014, that demolition and construction of the project will take at least a year, and lease-up will take another year, I project $2.10 monthly rent per square foot for 2016 which is comparable to projected rents for comparable properties in the Urban Core submarket. Based on the rental growth of the Urban Core submarket, I project 3 percent annual rent growth with property operations being stabilized by 2017. Additionally, observing the historical vacancy rates for the Sacramento Region in Chapter 3, I forecast vacancy loss of 5.5 percent and concession loss of 1 percent in 2017. Table 12 illustrates my calculation of estimated annual EGI for my redevelopment concept.

Table 12 - Projected 2017 Effective Gross Income (EGI)

INCOME		STABILIZED
Scheduled Gross Rent	$2.163 per sq ft.* @ 950 sq ft @ 526 units X 12 months	$12,970,213
Vacancy	5.50%	($713,362)
Concessions	1.00%	($129,702)
Effective Gross Income (EGI)		$12,127,149
		*Projected 2017 rental rate
Source: Dylan Herrick		

[21] Concession loss includes items that discount the value of the actual rent such as free rent periods when a tenant executes a long-term lease. These discounts are typically used when vacancy is increasing or the demand for units is weak.
[22] Fixed expenses include property taxes, property insurance, and capital reserves.
[23] Variable expenses include administrative costs, management fees and on-site staff salaries, utilities, marketing/promotion, and repairs and maintenance.

At this point, annual operating expense is difficult to estimate as a detailed budget is beyond the scope of this project. For now, I will estimate projected operating expenses as a percentage of EGI using similar figures from comparable apartment communities. Based on my discussion with The Garibaldi Company, a regional property manager with over 3,000 units under management, Table 13 identifies annual operating expense as a percentage of EGI for five comparable apartment communities as well as a projected percentage for my redevelopment concept.

Table 13 - Comparable Properties Operating Expense

Property Name	Location	Year Built	Number of Units	Operating Expense as a % of EGI
Marina Village West	Stockton, CA	1973	528	42%
Venetian Bridges	Stockton, CA	1981	382	43%
Crown Ridge	Modesto, CA	1991	184	42%
Emerald Point	Rocklin, CA	1999	164	43%
The Falls at Arden	Sacramento, CA	1982	272	42%
SMUD Site	Sacramento, CA	2016*	526	42%
				*Projected
Source: The Garibaldi Company				

As shown in Table 14, using projected EGI and annual operating expenses, I calculate NOI for my redevelopment concept once the property is leased-up and stabilized in 2017.

Table 14 - Projected 2017 Net Operating Income (NOI)

		STABILIZED
Effective Gross Income (EGI)		$12,127,149
Less:		
Annual Operating Expenses	42% of EGI	($5,093,403)
Net Operating Income (NOI)		$7,033,747
Source: Dylan Herrick		

With a justifiable NOI estimated, I can now determine a market value for my redevelopment concept using a cap rate valuation approach. This approach derives value

by dividing the property's projected NOI by a market cap rate. Table 15 illustrates a value matrix indicating price and price per unit associated with varying cap rates.

Table 15 – 2017 Projected Market Value Matrix

CAP	PRICE	PRICE PER UNIT
6.00%	$117,229,110	$222,869
6.25%	$112,539,946	$213,954
6.50%	$108,211,486	$205,725
6.75%	***$104,203,654***	***$198,106***
7.00%	$100,482,095	$191,031
7.25%	$97,017,195	$184,443
7.50%	$93,783,288	$178,295
Source: Dylan Herrick		

I project a 2017 stabilized market value of approximately $104,000,000 based on a 6.75 percent cap rate which is representative of the historical sales trends presented in Chapter 3 and the fact that my redevelopment concept will be one of the finest apartment communities in the region.

Sensitivity Analysis

With a realistic development cost and projected market value I can test my redevelopment concept's financial viability using sensitivity analysis, which is a technique used to predict the outcome of an investment given specific criteria, or assumptions, over a given period of time. Miles et al. (2007) assert that real estate investment is motivated by a combination of investment benefits that include periodic cash flow, appreciation, and tax shelter. Therefore, testing a proposed project's financial viability should explicitly address these investment benefits. Assuming that the tax benefits of real estate are individual to a specific investor, my sensitivity analysis will

attempt to predict the most likely, pessimistic, and optimistic outcome of my redevelopment concept.

The primary indicator used to measure the outcome of an investment in real estate is the internal rate of return, or IRR. The IRR is the annual rate of return on a property given a cash outflow (equity investment) and a stream of future cash inflows (property operations, future refinance or sale). According to Miles et al. (2007), real estate investors prefer the use of IRR as a comparative measure between and among alternative investments because the IRR is always stated per dollar or unit of investment, meaning that the IRR of a small and large investment can always be directly compared. Once determined, a developer can compare the IRR of my redevelopment concept with that of other development opportunities that have similar risk characteristics. To determine an IRR for each outcome of my redevelopment concept, I need to first make assumptions about potential changes in specific conditions and time frames.

Assumptions about market trends and property operations

I need to make specific assumptions about market trends and property operations to project future cash flows for my redevelopment concept. For my sensitivity analysis, I categorize these assumptions as most likely, pessimistic, or optimistic depending on which scenario I will be testing. Table 16 summarizes the market and property operation assumptions I'm using for the varying outcomes of my redevelopment concept to be tested in sensitivity analysis. In making these assumptions, I referred to the market data gathered in Chapter 3.

Table 16 - Scenario Assumptions for Sensitivity Analysis

Assumptions					
Most Likely		Pessimistic		Optimistic	
2016 Rental Rate per SqFt	$2.10	2016 Rental Rate per SqFt	$1.90	2016 Rental Rate per SqFt	$2.20
Vacancy Factor	5.50%	Vacancy Factor	7.00%	Vacancy Factor	5.00%
Concessions	1.00%	Concessions	2.00%	Concessions	1.00%
Year 1 Lease Up Vacancy	35.00%	Year 1 Lease Up Vacancy	40.00%	Year 1 Lease Up Vacancy	25.00%
Year 1 Lease Up Concessions	7.00%	Year 1 Lease Up Concessions	8.00%	Year 1 Lease Up Concessions	6.00%
Rental Growth	3.00%	Rental Growth	2.00%	Rental Growth	3.50%
Operating Expense Growth	2.00%	Operating Expense Growth	3.00%	Operating Expense Growth	2.00%
Disposition Cost	2.00%	Disposition Cost	2.00%	Disposition Cost	2.00%
Terminal Cap Rate	7.00%	Terminal Cap Rate	7.50%	Terminal Cap Rate	6.50%
Construction Loan Int. Rate	6.00%	Construction Loan Int. Rate	8.00%	Construction Loan Int. Rate	5.75%
Permanent Loan Int. Rate	4.50%	Permanent Loan Int. Rate	6.00%	Permanent Loan Int. Rate	4.25%

Source: Dylan Herrick

Moreover, because my investment goal is a long-term "hold," my sensitivity analysis will target a ten-year time frame. A ten-year time frame is useful for my investment goal for two reasons. One, ten years is a round number for financial model testing. And two, forecasts that go beyond ten years are more unreliable. I'm also assuming construction takes one year and that the property has stabilized operations after another year.

Cash Flow and Return Analysis

For my sensitivity analysis I present both unleveraged and leveraged "before-tax" IRR projections. My IRR analysis is "before-tax" analysis because tax laws change frequently and are specific to individual investors, and therefore beyond the scope of this project. Unleveraged IRR analysis projects returns without taking into consideration the effects of borrowing money while leveraged IRR analysis projects returns including the cost of financing. It is beneficial to take both unleveraged and leveraged analysis into account when testing a proposed project's viability because unleveraged analysis indicates the strength of the underlying property, while leveraged analysis results can be positively or negatively affected by forces unrelated to the property itself. Determining if

an IRR is adequate depends on what a developer could earn on comparable projects with similar risk characteristics. Observing Table 17, analysis indicates an 11.99 percent unleveraged and 32.86 percent leveraged IRR using the assumptions set forth in the "most likely" scenario. Observing Table 18, analysis indicates a 7.52 percent unleveraged and 9.27 percent leveraged IRR using the assumptions set forth in the "pessimistic" scenario. Observing Table 19, analysis indicates a 14.91 percent unleveraged and 43.11 percent leveraged IRR using the assumptions set forth in the "optimistic" scenario.

Table 17 - Most Likely IRR Analysis

Unleveraged 10-Year IRR Analysis

	Construction	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Potential Income	-	12,592,440	12,970,213	13,359,320	13,760,099	14,172,902	14,598,089	15,036,032	15,487,113	15,951,726	16,430,278
Vacancy	-	(4,407,354)	(713,362)	(734,763)	(756,805)	(779,510)	(802,895)	(826,982)	(851,791)	(877,345)	(903,665)
Concessions	-	(881,471)	(129,702)	(133,593)	(137,601)	(141,729)	(145,981)	(150,360)	(154,871)	(159,517)	(164,303)
Effective Gross Income (EGI)	-	7,303,615	12,127,149	12,490,964	12,865,693	13,251,664	13,649,213	14,058,690	14,480,451	14,914,864	15,362,310
Operating Expenses	-	(3,067,518)	(5,093,403)	(5,195,271)	(5,299,176)	(5,405,160)	(5,513,263)	(5,623,528)	(5,735,999)	(5,850,719)	(5,967,733)
Net Operating Income (NOI)	-	4,236,097	7,033,747	7,295,693	7,566,517	7,846,504	8,135,951	8,435,162	8,744,452	9,064,145	9,394,577
Construction & Acquisition Cost	(84,000,000)	-	-	-	-	-	-	-	-	-	-
Sale Price	-	-	-	-	-	-	-	-	-	-	134,208,241
Disposition Cost	-	-	-	-	-	-	-	-	-	-	(2,684,165)
P. Pre-tax Cash Flow	(84,000,000)	4,236,097	7,033,747	7,295,693	7,566,517	7,846,504	8,135,951	8,435,162	8,744,452	9,064,145	140,918,653
10-Year Unleveraged IRR											11.99%

Leveraged 10-Year IRR Analysis

	Construction	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Potential Income	-	12,592,440	12,970,213	13,359,320	13,760,099	14,172,902	14,598,089	15,036,032	15,487,113	15,951,726	16,430,278
Vacancy	-	(4,407,354)	(713,362)	(734,763)	(756,805)	(779,510)	(802,895)	(826,982)	(851,791)	(877,345)	(903,665)
Concessions	-	(881,471)	(129,702)	(133,593)	(137,601)	(141,729)	(145,981)	(150,360)	(154,871)	(159,517)	(164,303)
Effective Gross Income (EGI)	-	7,303,615	12,127,149	12,490,964	12,865,693	13,251,664	13,649,213	14,058,690	14,480,451	14,914,864	15,362,310
Operating Expenses	-	(3,067,518)	(5,093,403)	(5,195,271)	(5,299,176)	(5,405,160)	(5,513,263)	(5,623,528)	(5,735,999)	(5,850,719)	(5,967,733)
Net Operating Income (NOI)	-	4,236,097	7,033,747	7,295,693	7,566,517	7,846,504	8,135,951	8,435,162	8,744,452	9,064,145	9,394,577
Debt Service	(3,780,000)	(3,780,000)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)
Principal Paydown	-	-	1,259,930	1,317,811	1,378,351	1,441,672	1,507,902	1,577,175	1,649,630	1,725,414	1,804,679
Construction (Less: Acquisition Cost)	(73,500,000)	-	-	-	-	-	-	-	-	-	-
Construction Loan	63,000,000	-	(63,000,000)	-	-	-	-	-	-	-	-
Permanent Loan	-	-	78,100,000	-	-	-	-	-	-	-	(64,743,871)
SMUD Land Acquisition Payoff	(735,000)	(735,000)	(11,235,000)	-	-	-	-	-	-	-	-
Sale Price	-	-	-	-	-	-	-	-	-	-	134,208,241
Disposition Cost	-	-	-	-	-	-	-	-	-	-	(2,684,165)
Pre-Tax Cash Flow	$(15,015,000)	$ (278,903)	$ 7,410,022	$3,864,849	$ 4,196,213	$ 4,539,521	$ 4,895,198	$ 5,263,682	$ 5,645,427	$ 6,040,905	$ 73,230,806
10-Year Leveraged IRR											32.86%

Source: Dylan Herrick

Table 18 - Pessimistic IRR Analysis

Unleveraged 10-Year IRR Analysis											
	Construction	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Potential Income	-	11,393,160	11,621,023	11,853,444	12,090,513	12,332,323	12,578,969	12,830,549	13,087,160	13,348,903	13,615,881
Vacancy		(4,557,264)	(813,472)	(829,741)	(846,336)	(863,263)	(880,528)	(898,138)	(916,101)	(934,423)	(953,112)
Concessions	-	(911,453)	(232,420)	(237,069)	(241,810)	(246,646)	(251,579)	(256,611)	(261,743)	(266,978)	(272,318)
Effective Gross Income (EGI)	-	5,924,443	10,575,131	10,786,634	11,002,366	11,222,414	11,446,862	11,675,799	11,909,315	12,147,502	12,390,452
Operating Expenses	-	(2,488,266)	(4,441,555)	(4,574,802)	(4,712,046)	(4,853,407)	(4,999,009)	(5,148,980)	(5,303,449)	(5,462,552)	(5,626,429)
Net Operating Income (NOI)	-	3,436,177	6,133,576	6,211,832	6,290,321	6,369,007	6,447,853	6,526,820	6,605,866	6,684,949	6,764,022
Construction & Acquisition Cost	(84,000,000)	-	-	-	-	-	-	-	-	-	-
Sale Price	-	-	-	-	-	-	-	-	-	-	90,186,967
Disposition Cost	-	-	-	-	-	-	-	-	-	-	(1,803,739)
Pre-tax Cash Flow	(84,000,000)	3,436,177	6,133,576	6,211,832	6,290,321	6,369,007	6,447,853	6,526,820	6,605,866	6,684,949	95,147,250
10-Year Unleveraged IRR											7.52%
Leveraged 10-Year IRR Analysis											
	Construction	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Potential Income	-	11,393,160	11,621,023	11,853,444	12,090,513	12,332,323	12,578,969	12,830,549	13,087,160	13,348,903	13,615,881
Vacancy	-	(4,557,264)	(813,472)	(829,741)	(846,336)	(863,263)	(880,528)	(898,138)	(916,101)	(934,423)	(953,112)
Concessions	-	(911,453)	(232,420)	(237,069)	(241,810)	(246,646)	(251,579)	(256,611)	(261,743)	(266,978)	(272,318)
Effective Gross Income (EGI)	-	5,924,443	10,575,131	10,786,634	11,002,366	11,222,414	11,446,862	11,675,799	11,909,315	12,147,502	12,390,452
Operating Expenses	-	(2,488,266)	(4,441,555)	(4,574,802)	(4,712,046)	(4,853,407)	(4,999,009)	(5,148,980)	(5,303,449)	(5,462,552)	(5,626,429)
Net Operating Income (NOI)	-	3,436,177	6,133,576	6,211,832	6,290,321	6,369,007	6,447,853	6,526,820	6,605,866	6,684,949	6,764,022
Debt Service	(5,040,000)	(5,040,000)	(4,903,124)	(4,903,124)	(4,903,124)	(4,903,124)	(4,903,124)	(4,903,124)	(4,903,124)	(4,903,124)	(4,903,124)
Principal Paydown	-	-	836,890	888,508	943,309	1,001,490	1,063,260	1,128,839	1,198,464	1,272,382	1,350,860
Construction	(73,500,000)	-	-	-	-	-	-	-	-	-	-
Construction Loan	63,000,000	-	(63,000,000)	-	-	-	-	-	-	-	-
Permanent Loan	-	-	68,150,000	-	-	-	-	-	-	-	(64,743,871)
SMUD Land Acquisition Payoff	(735,000)	(735,000)	(11,235,000)	-	-	-	-	-	-	-	-
Sale Price	-	-	-	-	-	-	-	-	-	-	90,186,967
Disposition Cost	-	-	-	-	-	-	-	-	-	-	(1,803,739)
Pre-Tax Cash Flow	$(16,275,000)	$(2,338,823)	$(4,017,658)	$2,197,215	$ 2,330,505	$ 2,467,372	$ 2,607,988	$ 2,752,535	$ 2,901,206	$ 3,054,207	$ 26,851,114
10-Year Leveraged IRR											9.27%

Source: Dylan Herrick

Unleveraged 10-Year IRR Analysis

	Construction	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Potential Income	-	13,192,080	13,653,803	14,131,686	14,626,295	15,138,215	15,668,053	16,216,435	16,784,010	17,371,450	17,979,451
Vacancy		(3,298,020)	(682,690)	(706,584)	(731,315)	(756,911)	(783,403)	(810,822)	(839,200)	(868,573)	(898,973)
Concessions	-	(791,525)	(136,538)	(141,317)	(146,263)	(151,382)	(156,681)	(162,164)	(167,840)	(173,715)	(179,795)
Effective Gross Income (EGI)	-	9,102,535	12,834,575	13,283,785	13,748,717	14,229,922	14,727,970	15,243,449	15,776,969	16,329,163	16,900,684
Operating Expenses	-	(3,823,065)	(5,390,521)	(5,498,332)	(5,608,298)	(5,720,464)	(5,834,874)	(5,951,571)	(6,070,603)	(6,192,015)	(6,315,855)
Net Operating Income (NOI)	-	5,279,470	7,444,053	7,785,453	8,140,419	8,509,458	8,893,096	9,291,877	9,706,367	10,137,149	10,584,829
Construction & Acquisition Cost	(84,000,000)	-	-	-	-	-	-	-	-	-	-
Sale Price	-	-	-	-	-	-	-	-	-	-	162,843,522
Disposition Cost	-	-	-	-	-	-	-	-	-	-	(3,256,870)
Pre-tax Cash Flow	(84,000,000)	5,279,470	7,444,053	7,785,453	8,140,419	8,509,458	8,893,096	9,291,877	9,706,367	10,137,149	170,171,481
10-Year Unleveraged IRR											14.19%

Leveraged 10-Year IRR Analysis

	Construction	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Potential Income	-	13,192,080	13,653,803	14,131,686	14,626,295	15,138,215	15,668,053	16,216,435	16,784,010	17,371,450	17,979,451
Vacancy	-	(3,298,020)	(682,690)	(706,584)	(731,315)	(756,911)	(783,403)	(810,822)	(839,200)	(868,573)	(898,973)
Concessions	-	(791,525)	(136,538)	(141,317)	(146,263)	(151,382)	(156,681)	(162,164)	(167,840)	(173,715)	(179,795)
Effective Gross Income (EGI)	-	9,102,535	12,834,575	13,283,785	13,748,717	14,229,922	14,727,970	15,243,449	15,776,969	16,329,163	16,900,684
Operating Expenses	-	(3,823,065)	(5,390,521)	(5,498,332)	(5,608,298)	(5,720,464)	(5,834,874)	(5,951,571)	(6,070,603)	(6,192,015)	(6,315,855)
Net Operating Income (NOI)	-	5,279,470	7,444,053	7,785,453	8,140,419	8,509,458	8,893,096	9,291,877	9,706,367	10,137,149	10,584,829
Debt Service	(3,622,500)	(3,622,500)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)	(4,748,655)
Principal Paydown	-	-	1,259,930	1,317,811	1,378,351	1,441,672	1,507,902	1,577,175	1,649,630	1,725,414	1,804,679
Construction & Acquisition Cost	(73,500,000)	-	-	-	-	-	-	-	-	-	-
Construction Loan	63,000,000	-	(63,000,000)	-	-	-	-	-	-	-	-
Permanent Loan	-	-	82,700,000	-	-	-	-	-	-	-	(64,743,871)
SMUD Land Acquisition Payoff	(735,000)	(735,000)	(11,235,000)	-	-	-	-	-	-	-	-
Sale Price	-	-	-	-	-	-	-	-	-	-	162,843,522
Disposition Cost	-	-	-	-	-	-	-	-	-	-	(3,256,870)
Pre-Tax Cash Flow	$(14,857,500)	$ 921,970	$12,420,329	$4,354,609	$ 4,770,115	$ 5,202,475	$ 5,652,344	$ 6,120,398	$ 6,607,342	$ 7,113,908	$102,483,634
10-Year Leveraged IRR											43.11%

Source: Dylan Herrick

Table 19 - Optimistic IRR Analysis

While my investment goal is a long-term hold strategy, a developer may opt for an alternative investment strategy such as build and sell. This strategy is relevant when a developer's primary goal is to develop additional projects. Selling the property provides the developer, under positive circumstances, the opportunity to reinvest development equity and profits into new projects. Therefore, it is beneficial to forecast profits under "most likely" circumstances should a developer decide to sell the property in 2017 once the project is stabilized. Using the 2017 projected market value for my redevelopment concept, Table 20 illustrates the profit gained from a property sale in 2017 once the project is stabilized under the most likely scenario. Unleveraged analysis indicates a 16.54 percent IRR and 134.99 percent return on equity. Leveraged analysis indicates a 43.08 percent IRR and 203.6 percent return on equity.

Table 17 - Build & Sell Investment Analysis

Unleveraged Cash Flow Analysis			
	Construction	2016	2017
Gross Potential Income	-	12,592,440	12,970,213
Vacancy		(4,407,354)	(713,362)
Concessions	-	(881,471)	(129,702)
Effective Gross Income (EGI)	-	7,303,615	12,127,149
Operating Expenses	-	(3,067,518)	(5,093,403)
Net Operating Income (NOI)	-	4,236,097	7,033,747
Construction & Acquisition Cost	(84,000,000)	-	-
Sale Price	-	-	104,203,654
Disposition Cost	-	-	(2,084,073)
Pre- Pre-tax Cash Flow	$ (84,000,000)	$ 4,236,097	$ 109,153,327
Unleveraged IRR			16.54%
Return on Equity (ROE)			134.99%
Profit			$ 29,389,424
Leveraged Cash Flow Analysis			
	Construction	2016	2017
Gross Potential Income	-	12,592,440	12,970,213
Vacancy	-	(4,407,354)	(713,362)
Concessions	-	(881,471)	(129,702)
Effective Gross Income (EGI)	-	7,303,615	12,127,149
Operating Expenses	-	(3,067,518)	(5,093,403)
Net Operating Income (NOI)	-	4,236,097	7,033,747
Debt Service	(3,780,000)	(3,780,000)	(3,780,000)
Construction	(73,500,000)	-	-
Construction Loan	63,000,000	-	(63,000,000)
SMUD Land Acquisition Payoff	(735,000)	(735,000)	(11,235,000)
Sale Price	-	-	104,203,654
Disposition Cost	-	-	(2,084,073)
Pre-Tax Cash Flow	$ (15,015,000)	$ (278,903)	$ 31,138,327
Leveraged IRR			43.08%
Return on Equity (ROE)			203.60%
Profit			$ 15,844,424

Source: Dylan Herrick

Chapter 6

CONCLUSION

Assuming the role of a developer, I have collected background information, analyzed market trends, conceived a redevelopment concept for the SMUD site that theoretically meets a future demand, and tested that concept's physical and financial viability given a specific set of facts and my own assumptions. While feasibility never demonstrates absolute certainty for a developer, it does provide a framework for determining certainty at different stages of decision making. Within the framework are circumstances and assumptions that can vary. Most successful developers recognize those changes and appropriately adapt their projects. Reflecting on this project, I have drawn certain conclusions about my concept's feasibility which has provided me with enough certainty to consider a recommendation on how to further proceed.

Feasibility

In terms of physical feasibility, my redevelopment concept's success is contingent upon the City of Sacramento's approval of a General Plan Amendment and a new zoning designation. If the City approves this Amendment, my concept meets current zoning requirements and is consistent with local and regional land use policy. I am confident that the City will approve this Amendment because my redevelopment concept is consistent with the six themes of Sacramento's recently updated General Plan, which are: making great places, growing smarter, maintaining a vibrant economy, creating a healthy city, reducing our "carbon footprint", and developing a sustainable future. Moreover, my redevelopment concept is consistent with the fundamental Guiding Principles that the

Sacramento City Council adopted to guide formation of the General Plan. My concept complies directly with the following Guiding Principles:

1. Promote developments that foster accessibility and connectivity between areas and safely and efficiently accommodate a mixture of cars, transit, bicyclists, and pedestrians.
2. Include a mix of housing types within neighborhoods to promote a diversity of household types and housing choices for residents of all ages and income levels to promote stable neighborhoods.
3. Use the existing assets of infrastructure and public facilities to increase infill and reuse, while maintaining important qualities of community character.

My concept is also not contrary to any of the Guiding Principles or General Plan policies. Therefore, I believe that the City of Sacramento and community stakeholders are likely to support my proposed redevelopment project.

In terms of financial feasibility, my redevelopment concept's success is contingent upon the certainty of my assumptions and the general condition of the market. If my assumptions are correct and the market reacts as I have forecasted, my redevelopment concept looks like a successful investment under all three scenarios tested in my sensitivity analysis. Under my most likely scenario, a leveraged IRR of 32.86 percent is a substantial return over a ten year period and a developer would be hard pressed to find similar returns on other opportunities. However, under my pessimistic scenario, even though my redevelopment concept is profitable over a ten year period, it is likely that a developer would pass on the opportunity as a leveraged IRR of 9.27 percent

isn't large enough to justify the significant risk. Therefore, a developer will need to carefully reanalyze my assumptions and market conditions as the development process progresses to ensure the highest returns possible. Additionally, should circumstances confirm my most likely scenario, sale of the stabilized property would potentially be a better investment strategy. This decision will ultimately rest with the developer who chooses to move forward with my redevelopment concept based on the developer's specific investment criteria.

Recommendation

I recommend that a developer proceed with my redevelopment concept. Keeping in mind that my redevelopment concept is just one possible redevelopment idea for the SMUD site and that another developer could presumably conceive of a different redevelopment idea that similarly meets physical and financial feasibility testing, contacting SMUD is the logical next step in the development process. Once SMUD determines its motivation and timeline, a developer should negotiate and enter into a formal agreement such as the acquisition structure I am recommending. If SMUD accepts such an offer and chooses a developer pursuing my redevelopment concept, the next step will be to complete a much more detailed study using my information and feasibility analysis as a foundation.

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