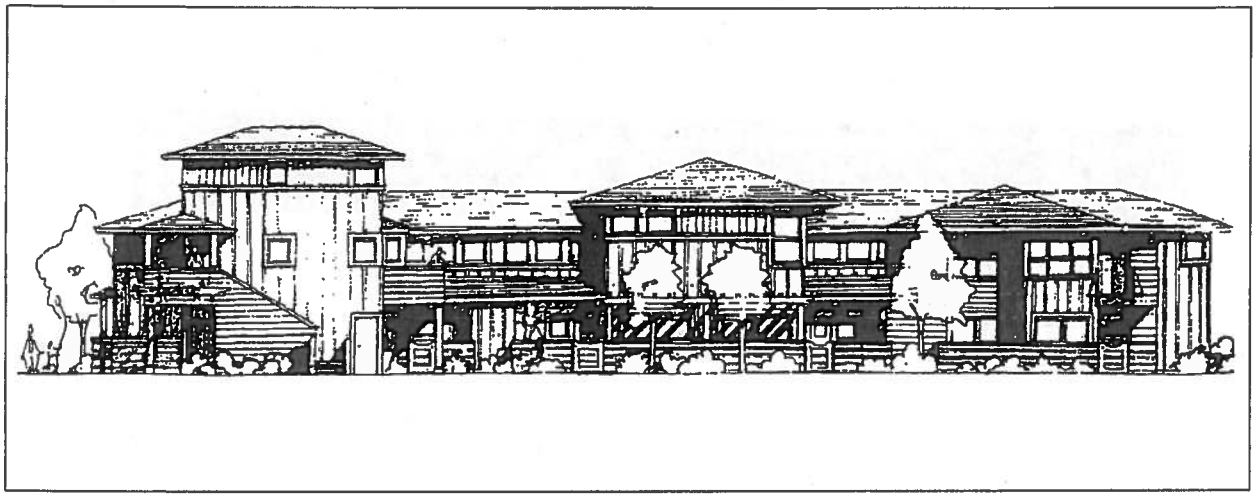
THE CALIFORNIA AFFORDABLE HOUSING COST STUDY



COMPARISON OF MARKET-RATE AND AFFORDABLE RENTAL PROJECTS

JANUARY 1993

PREPARED FOR

The California Affordable Housing Cost Task Force

SPONSORED BY

Local Initiative Support Corporation
LISC's National Equity Fund
The California Tax Credit Allocation Committee

PREPARED BY

Bay Area Economics
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EXECUTIVE SUMMARY

The cost to produce any kind of housing in California is high relative to other parts of the country. However, even within California, some members of the housing industry have voiced concern that affordable housing production costs might be excessive compared to similar market rate projects.

This Study examines the cost to produce affordable and market rate housing in California in an empirical, case-study manner to identify differences, understand the underlying causes of those differences, and provide a basis for recommending industry changes to reduce and control the cost of developing affordable housing. In developing the framework and methodology for this Study, Bay Area Economics was advised by the California Affordable Housing Cost Task Force, a 25-member panel of housing and finance industry experts. The Task Force used the Study to inform its development of recommendations to reduce the costs of producing affordable housing in California.

The Study is designed to examine the following questions:

- Do affordable housing projects cost more than market rate projects?
- What specific factors impact the costs of developing affordable housing?
- How does geographic location affect development costs?

Key Findings

The key findings of the Study can best be presented in terms of the three major questions the Study was designed to address.

1. Do affordable housing projects cost more than market rate projects?

   - **Most affordable projects in the Study sample were equivalent to their market rate counterparts in terms of development costs. In fact, many affordable projects cost less than their market rate counterparts. Therefore, the findings of this Study do not support the assertion that affordable projects are systematically more expensive to produce than comparable market rate projects.** This Study looks at the development costs of 35 projects, analyzed at a regional level as well as in pairs of similar market rate and affordable projects. Depending on the unit of measurement used to compare similar projects, the majority of affordable projects were equivalent to or less expensive to produce than their market rate counterparts. Among 14 pairs of market rate and affordable projects (matched by construction type, density, and location) the affordable project was less expensive in nine pairs when analyzed on the basis of number of persons housed per unit.

- **The unit of measurement used to evaluate cost is key to any conclusion about cost differences.** Since it is difficult to find two projects with the exact same unit mix in terms of number of bedrooms (due to the large-unit family orientation of many affordable housing projects), per unit comparisons of cost can be misleading. Out of the 20 affordable projects in the sample, 15 projects had one-fifth or more of their units in the "three bedroom or more" size category; only three of the fifteen market-rate projects had this concentration of large units. To avoid an "apples to oranges" comparison, the Study also looks at a per person housed cost measure, which accounts for the differences in number of bedrooms between otherwise comparable projects.

2. What specific factors impact the costs of affordable housing development?

Although the Study found that there were no systematic differences among the overall costs of comparable affordable and market rate projects, there were striking total cost differences between certain pairs of affordable and market rate projects and, for other pairs, between specific cost components. To further explore the reasons why some affordable projects in the sample had higher costs than their market rate counterparts, detailed analyses were conducted for specific cost components. Major findings of the analyses include:

- **Affordable projects in the sample tend to have a higher proportion of three or more bedroom units than their market rate comparables; this reflects the orientation of affordable projects towards family housing. Costs per unit for affordable projects with higher proportions of three or more bedroom units were usually higher than their market rate counterparts, due in part to the bedroom mix.** Seventy percent of the affordable projects in the Study sample had a significant proportion of three or more bedroom units, compared to only 20 percent of the market rate projects. When expressed in terms of total bedroom counts for the sample as a whole, almost 30 percent of the affordable units were three or four bedroom units, compared with only six percent of all the market rate units.

  The higher costs for projects with higher concentrations of three and four bedroom units can be partly attributed to larger average unit sizes (in square feet), more complex unit design, increased quantities of interior and exterior walls, higher parking ratios, and greater structural requirements.

- **Affordable projects have twice as many financing sources as market rate projects,** reflecting the greater complexity involved in making housing affordable and adding to the difficulty and duration of the development process. This factor explains the longer pre-development time periods experienced by most of the affordable projects, and underscores the need for streamlined financing approaches for affordable projects in California.

- **Affordable housing projects take longer than market rate projects to move through the pre-development period (defined as site control to construction start).** Longer pre-development periods for affordable housing projects are related to the complexity and uncertainty of their financing, design difficulties, and the experience levels of developers. Additional pre-development time can add to overall project cost through additional land, planning and overhead expenses.

- **Prevailing wage requirements can significantly increase the cost of producing affordable housing projects; this impact varies by geographic region.** Based on cost estimates conducted for the study, the difference in construction costs (hard costs) resulting from meeting prevailing wage standards ranges from 5 percent to 15 percent in the Bay Area to 15 to 30 percent in the Los Angeles area. Depending on the sources of financing used, many affordable projects are subject to Davis-Bacon wage standards or local and state prevailing-wage requirements as a condition of receiving project financing.

- **Affordable and market rate projects generate financial return in different ways; these differences tend to overstate reported affordable housing costs.** Affordable projects derive revenue from a project by taking an upfront development fee, which is reported in a project's capital costs. For market rate projects, potential sources of return include cash flow, management fees, profit upon sale, and profit from related parties providing construction services to a project; most of these are typically not included in a project's development costs. This difference in how financial return is received and reported tends to overstate total reported costs for affordable projects. When comparing the range of development fees reported by affordable developers in the sample with an example of the imputed profit for a market rate project, both kinds of projects have similar ranges of return.

- **The costs of syndication to raise funds for affordable housing projects using Low Income Housing Tax Credits (LIHTC) can add anywhere from one to five percent to project costs.** LIHTCs are structured so that equity funds need to be raised via syndication. This system of financing can add to the costs of production for affordable housing. It appears that the bulk of syndication costs are fixed costs (i.e. legal fees, consultant fees), resulting in smaller projects paying a higher percentage of project costs for syndication- related expenses in comparison to larger projects.

- **Architectural and engineering costs can be higher for affordable than for market rate projects.** On average, the market rate projects in the sample paid 3.6 percent of total adjusted costs for A & E services compared to an average of 4.5 percent for affordable projects. The higher percentage for affordable housing projects may in part be related to the experience levels of developers and the additional time in pre-development experienced by affordable housing projects,

requiring architects to spend more time on an affordable project in comparison to a market rate project.

- **There is no systematic difference in costs between affordable projects developed by non-profit and for-profit developers.** Based on an analysis of the 14 pairs of similar projects in the sample, some for-profit developers of affordable housing performed better (in terms of cost) than their market rate counterparts, and some of the non-profit developers of affordable housing also performed better than their market rate counterparts.

- **NIMBY ("Not In My Back Yard") opposition does not explain the lengthy pre-development period for the affordable projects in this sample.** Only two of the 35 projects in the sample, both located in San Francisco, stated that they encountered significant neighborhood opposition. This low incidence partly reflects the inherent bias of the sample, which contains only built projects that have not been stopped because of NIMBYism.

3. How does geographic location affect cost?

- **Urban areas have higher costs than suburban areas.** San Francisco, Southern Alameda County, and Los Angeles had the most expensive costs for both affordable and market rate projects. Fresno County, a predominantly rural and suburban area, had the least expensive per unit costs for both market rate and affordable projects of all the regions analyzed.

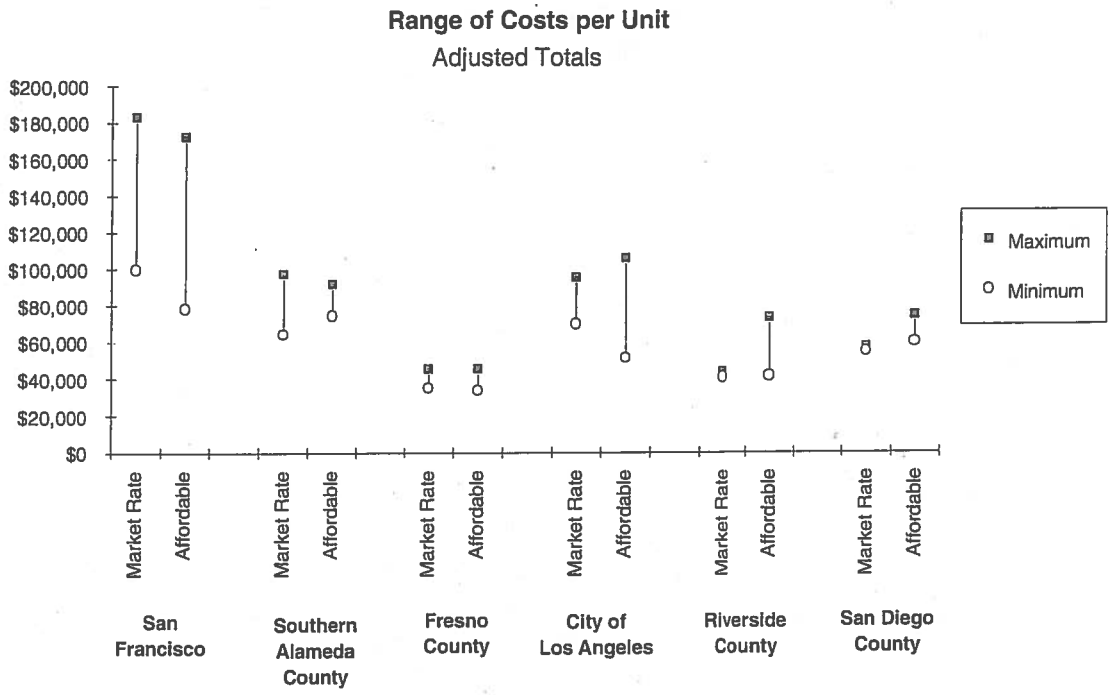
- **There are regional differences in the way affordable project costs compare to market rate project costs.** Affordable projects had lower or equivalent costs compared to market rate projects in San Francisco, Southern Alameda County, Fresno County and the City of Los Angeles. Affordable project costs were higher than similar market rate projects in Riverside County and San Diego County.

- **Urban projects use more expensive parking solutions.** Projects in urban areas such as San Francisco and Los Angeles tend to be higher density than suburban locations (i.e. with over 30 units per acre). Because of their density, these kinds of projects must provide parking in structures either at-grade, in podiums, or in underground parking structures; structured parking is necessary to maximize density on high-cost urban land. In the sample projects, structured parking added as much as 10 percent to total project costs.

- **Land is a significant variable between regions.** The cost per unit for land ranged from $1,800 to $5,200 for Fresno projects (including both affordable and market rate projects), while in San Francisco the range was $22,000 to over $39,000 per unit.

- **Fees/permit charges can be a significant cost factor, and can vary substantially from region to region.** Local governments in California finance public service and infrastructure costs, in part, by charging fees for all types of residential development. Affordable housing projects in the sample paid an average of 5.4 percent of total development costs for local fees and permits; similar percentages were reported by the market rate projects. Average fees charged for both types of development varied substantially from region to region, ranging from a low of $1,569 per unit in Fresno to a high of $6,793 per unit in Southern Alameda County. In addition, some of the fees/permit charges varied substantially between paired projects (i.e. matched for construction type, density, unit mix) located in adjacent communities within the same region.

Figure 1: Summary of Regional Costs per Unit



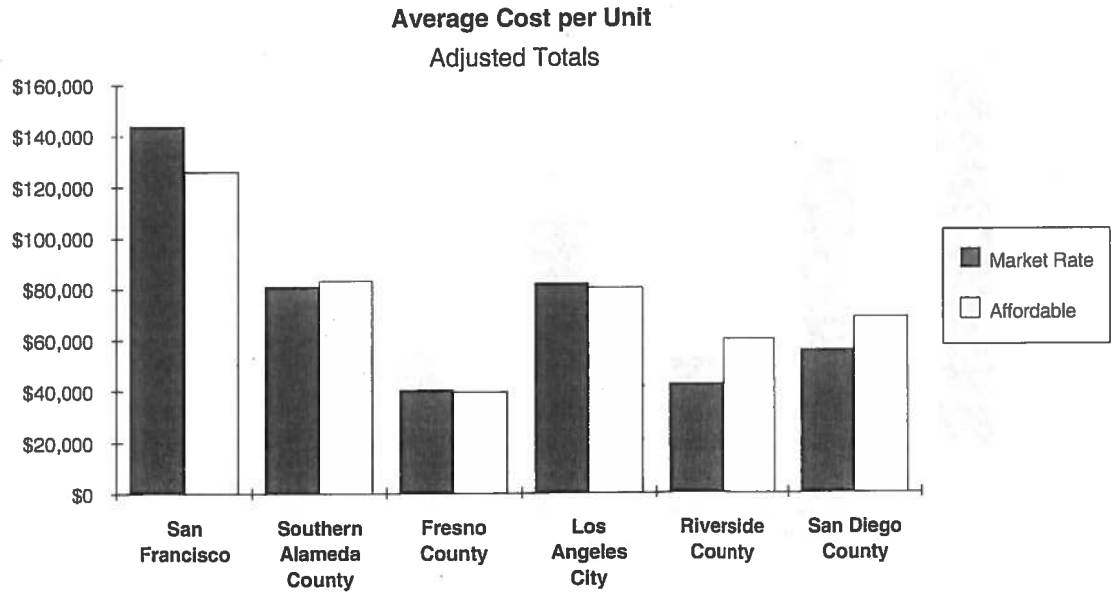
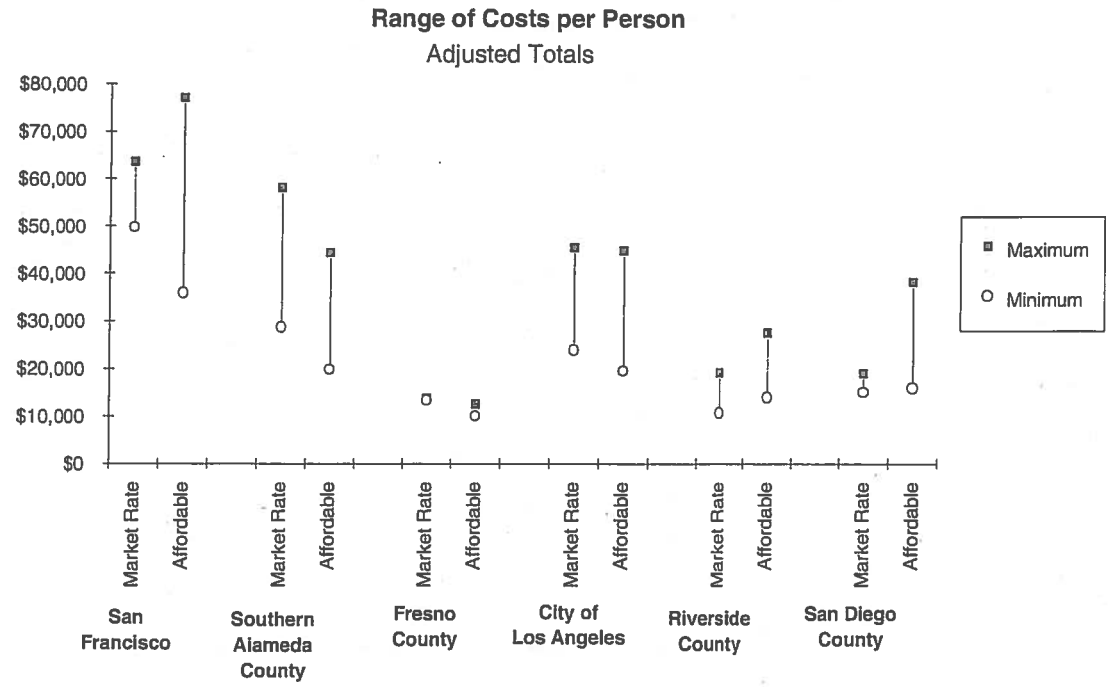
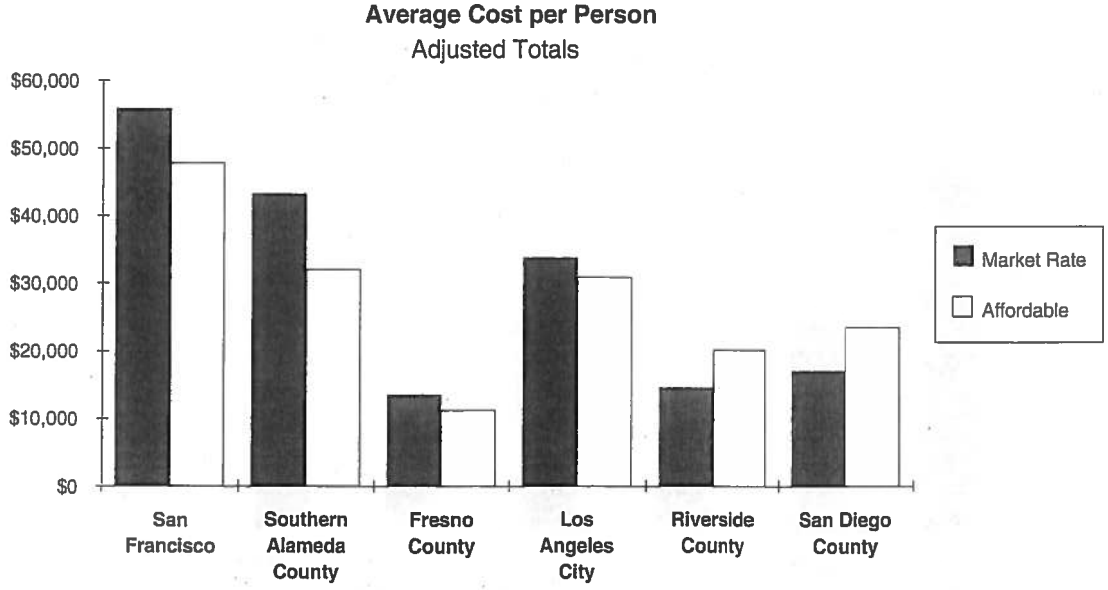


Figure 2: Summary of Regional Costs per Person





Approach and Methodology

The Study uses a case-study approach: actual costs for recently constructed affordable and market rate housing projects were documented to determine if there are cost differences between projects with similar physical characteristics that are serving different income groups. Overall, complete project data was obtained on 35 projects built in the past three years, representing 3,200 multifamily units in six areas of California. The Study looked only at new-construction multifamily projects completed after January 1990 (with two exceptions - two projects were completed during or at the end of 1989).

The Study analyzed 35 projects located in the following geographic regions:

Bay Area Region
- City of San Francisco
- Southern Alameda County

Fresno County

Los Angeles Region
- City of Los Angeles
- Riverside County

San Diego County

Fourteen matched pairs were analyzed for cost differences, and the total sample of 35 projects was also analyzed on a regional basis.

> Because the sample represents a small proportion of the affordable and market rate multifamily housing built statewide during the time period analyzed, it should not be interpreted as representative of what would be found from a statistically valid statewide survey. However, it should be noted that in certain areas, the Study sample constitutes a high proportion of multifamily units constructed during the prior two years. In San Francisco, the sample units are about 23 percent of all multifamily units permitted for the corresponding time period (one year lag from permit to unit completion). In Southern Alameda County, the sample represents almost 28 percent of units permitted, and in Los Angeles (city), the sample is about 4.5 percent of units permitted.

Over 200 projects were identified in the process of selecting the 35 projects in this sample. The goal was to generate pairs of affordable and market rate projects that matched as closely as possible with respect to certain criteria. Once a project had been identified as an appropriate subject, the project developer was asked to complete a survey providing information of the project's costs and development data. After completion of the survey by the developer, Bay Area Economics reviewed the information for completeness and accuracy. Typically a follow-up communication was made to ensure an accurate interpretation of data. In addition, cost data were verified where possible by examining documentation submitted to the California Tax Credit Allocation Committee, HUD, or construction lenders.

Measurement of Cost. How costs are analyzed is an important part of the study. Three different measures were used, for the reasons outlined below.

Per Unit, Per Bedroom, and Per Person Housed. In the development industry, cost per unit is one of the most commonly used ways to describe costs. This measure is flawed, however, if the units being compared are of different sizes or contain different numbers of bedrooms and bathrooms. Even when unit costs are presented as averages across a project, if two projects have different proportions of one, two, and three bedroom units, for example, the per-unit measure can be misleading, creating an "apples and oranges" comparison. Although costs per unit was one of the measures used in the study, the analysis also included two more accurate, less misleading measures: cost per bedroom and cost per person housed. "Cost per bedroom" was defined as total costs divided by the total number of bedrooms in a project. Both studio and one-bedroom units were counted as one bedrooms for this measure.

"Cost per person housed" was a new measure created for the study. It takes into account the difference between studios and one-bedroom units by applying a standard assumption that studios house 1 person, and all other unit sizes house 1.5 persons per bedroom. In this way, costs can be expressed in a way that accurately accounts for units with different bedroom mixes. The measure of "cost per person" closely tracks the results derived from looking at the more typical per-unit measurement. For example, when projects are analyzed at the regional level, 95 percent of the time the per-person measure tracked the per-unit measure. If average affordable project costs were higher or lower than the average market rate costs in a region when measured on a per-unit basis, in nearly all cases the per-person measurement was also correspondingly higher or lower.

"Cost per square foot" was not used in the Study because analysis of the data provided by project developers indicated that square foot data were reported inaccurately in many cases. This conclusion was reached because a number of projects reported unit sizes (based on detailed floor plan data collection) that, in total, exceeded the same developers' reported total square footage for their projects. In other cases, the reported detail for unit sizes, common area, and parking garage did not add up to the reported total square feet. To correct this problem, full drawings for each project could have been obtained; however, this was not undertaken for the Study because of time and budget constraints.

"Unadjusted" versus "Adjusted" Costs. This Study presents both "unadjusted" and "adjusted" costs for the per unit, per bedroom, and per person housed measures applied to each project. "Unadjusted" costs reflect total project costs. An "adjusted" cost is also presented for each cost measure to adjust for two major cost items that often vary significantly between market rate and affordable projects: land and development fees. These two cost items have been subtracted from the total costs for all of the projects in the sample to derive "adjusted" costs.

The "adjusted" cost approach allows for a more accurate comparison of projects for several reasons. First, many affordable projects acquire land with some form of public subsidy, either as a partial or total land write down (resulting in little or no land costs) or pay for land costs through long-term leases. Market rate projects are typically not subsidized in this manner. Market rate projects, however, use land acquisition techniques that differ from affordable projects, including the acquisition of land that is held for years before development and the purchase of land from related parties. In order to equalize all of these variations in reported land costs accurately, a current market value would need to be imputed for each project. The Task Force and consultants

determined that it would be too costly and time-consuming to accurately impute market land values for each project; instead, land costs were subtracted from each project's costs as part of the "adjusted" cost calculations.

The second development cost eliminated through the "adjusted" cost approach was developer fees. Affordable and market rate developers receive compensation for developing a project in different ways. Many affordable developers incorporate a development fee (typically paid in whole or in part at the completion of construction) into a project's development costs. Market rate developers primarily earn their compensation from other sources, such as cash flow and/or project sale, and do not separately identify upfront developer fees as part of a project's development costs. Nearly all of the affordable developers in the Study reported a development fee, while almost all of the market rate developers either reported no development fee or a nominal amount. As with the land cost, the Task Force and consultants determined that it would be difficult as well as inaccurate to impute a development fee to the market rate projects in the sample.

Description of the Sample

The Study contains cost and project data for 35 projects, including 20 affordable and 15 market rate projects. The following summarizes the sample:

- Of the affordable projects, 8 were built by for-profit developers and 12 were built by non-profit developers.

- The total sample included eight large projects with 150 to 300 units, 11 medium projects with 50 to 149 units, and 16 small projects with less than 50 units.

- Of the total affordable units in the sample, almost 30 percent were units with three or more bedrooms, compared to only six percent of the market rate sample's total units.

Geographic Breakdown of Sample

Area	No. of Projects	No. Units	No. Bedrms	No. Persons	Total Development Costs
City of San Francisco	7	536	813	1,217	$ 76,207,021
Southern Alameda County	4	358	548	831	34,375,992
Fresno County	4	506	1,078	1,617	21,990,086
City of Los Angeles	8	751	1,326	1,898	72,570,343
Riverside County	7	675	1,331	1,997	38,742,472
San Diego County	5	99	197	299	8,074,256
TOTAL:	**35**	**3,228**	**5,628**	**8,312**	**$ 273,834,305**

Conclusion

The data contained in this report do not support the assertion that affordable housing projects are systematically more expensive to produce than comparable market rate projects. It is very important to apply appropriate measures of cost that take into account differences between affordable and market rate projects, including project-cost reporting methods, land subsidies, and unit characteristics.

The findings of this Study highlight several aspects of affordable housing development in California that could be improved to reduce production costs. Certain factors pertain primarily to affordable housing, while other factors affect all types of multifamily development.

For affordable housing in particular, factors that could be influenced include the complexity of project financing, the time period for pre-development, the costs of syndication, prevailing-wage requirements, and expenditures for architectural and engineering services. Moreover, the cost impact of carrying out the public purpose of constructing affordable family units with three or more bedrooms should be recognized and considered in any discussion of affordable housing.

For all types of multifamily rental housing, both market rate and affordable, factors that could be altered to reduce costs include the design review process as practiced by some locales, more efficient use of space, and the choice of building type and parking solution used.

A companion Policy Report, authored by the California Affordable Housing Cost Task Force, provides numerous strategies to address these issues.

INTRODUCTION

In California, the cost of producing any type of new housing is high. The development approval process has evolved into a time-consuming endeavor, often taking several years to obtain permits from multiple agencies at the local, state and federal levels. Land costs have risen in some markets beyond the point where projects can be feasibly produced. Citizens and neighborhood groups have an impressive arsenal of legal and political weapons to fight new housing development, including the initiative and referendum processes. Financing has become difficult to secure. Both market rate and affordable projects face these obstacles, leading to high costs relative to most other parts of the U.S.

Sponsors of affordable housing projects may face additional obstacles leading to potentially even higher production costs than for market rate projects. Added costs can occur from even lengthier approvals processes due to neighborhood objections, higher site development costs due to more difficult sites, lack of economies of scale due to small project sizes, and higher transaction costs due to complicated financial and ownership structures. Costs for affordable projects can also be exacerbated by requirements to meet prevailing wages, construction of units with more bedrooms to serve low income families, and the provision of community amenities not found in market rate projects. Moreover, many complex affordable projects require extraordinary development and negotiation skills obtained from years of experience; this capacity-building process is difficult for some project sponsors to acquire against the backdrop of constantly changing federal and state housing programs and policies, as well as uncertain funding levels.

This Study provides an initial examination of the cost to produce affordable and market rate housing in California in an effort to identify differences, understand the underlying causes of those differences, and recommend industry changes to make affordable housing production more cost-effective. The Study is designed to examine the following questions:

- Do affordable housing projects cost more than market rate projects?
- What specific factors impact the costs of developing affordable housing?
- How does geographic location affect development costs?

This Study follows a case study approach based on empirical evidence. Actual costs for recently constructed affordable and market rate housing projects in various regions of the State have been documented to determine if there are cost differentials between projects with similar physical characteristics that are serving different income groups.

It is important to understand that this Study represents an important first step in assessing affordable housing production costs in California. The sample size for this Study, although limited, represents cost conditions for many of the multifamily projects built in certain regions of California during the past two years. While the limited sample size precludes considering the

findings contained in this report as statistically significant, this report should be considered descriptive of issues currently facing developers of market rate and affordable housing.

The Study process was two-fold. Bay Area Economics collected and analyzed data, while the Local Initiatives Support Corporation and California Tax Credit Allocation Committee convened a large Task Force composed of housing developers, architects, lenders, and public agencies to formulate recommendations aimed at mitigating conditions that might cause higher affordable housing production costs. The recommendations of the Task Force are contained in a separate companion report.

RESIDENTIAL DEVELOPMENT IN CALIFORNIA

The focus of this Study is on residential multifamily projects within California that serve different income groups. This Study does not address the question of why housing costs more to build in California than other regions in the nation. However, in order to avoid "sticker shock" with respect to the data presented herein, it is important to understand the general development process which all residential developers must go through to produce housing in California.

Land Acquisition

Most residential projects begin with land acquisition, which can occur as an outright purchase of land, an option to acquire land at some future date (usually after development approvals have been secured), or as a form of ground lease.

In many parts of California, particularly the urban areas of the Bay Area, the Los Angeles region, and San Diego, land costs can be extraordinarily high relative to other parts of the U.S. Experts have spent countless hours attempting to explain the factors that drive land costs in California's urban areas. Essentially, the prevalent theories can be reduced to:

- Strong economic growth stimulates demand for housing units
- Very strong sale prices for finished units drives land value
- Regulatory constraints and/or growth controls limit the land supply
- Speculation activity in anticipation of future economic growth or house price appreciation inflates land values

This Study cannot resolve these theories; one or more of them probably do impact land costs at any given time in certain locations. Irrespective of the reasons for California's high land costs, it is most important to note that both market rate and affordable housing developers face the same problem.

The Approval Process

The development approval process in California can be particularly complex and time-consuming. In general, a project cannot be built without completing the following processes or obtaining the following approvals:

1. Annexation via Local Area Formation Committee (LAFCO)
2. General Plan, Specific Plan or Area Plan Designation
3. Zoning Designation
4. California Environmental Quality Act (CEQA) Environmental Impact Report or Negative Declaration
5. Design Review (varies by jurisdiction)
6. Conditional Use Permit and/or Tentative Map (depends on project)
7. Building Permit
8. Certificate of Occupancy

Each of these steps is often highly regulated, and can involve different governing bodies. Further, many of the approvals incorporate one or more proscribed public hearings where interested parties can protest or modify a development proposal. Even if the land slated for development has appropriate General Plan and Zoning designations, environmental assessment and design review can add months or years to the time needed to obtain approvals.

In some cases, there are additional layers of regulation or review. If a community has some form of growth control or growth management in place, the project applicant may need to wait for available building permits. If a project is proposed for land located outside city boundaries, it can be required to go through an annexation process subject to additional studies, commission review, and even voter approval. Finally, some projects can obtain approvals and still be subject to voter referendum if enough objections to the approval decision arise.

Site and Infrastructure Improvements

Site and infrastructure improvements are of growing concern to developers of both market rate and affordable housing projects in California. The fiscal situation of most cities and counties has become increasingly constrained due to passage of Proposition 13 in 1978, as well as the current prolonged recession. One result of constrained local government finances has been the dramatic reduction of general fund public financing of infrastructure to serve new development, even for basic items such as roads, sewers, water systems, schools, and parks. Instead, most local governments have adopted impact fees, special taxes, or special assessments, or negotiated exactions from developers to fund off-site infrastructure to serve new projects. Thus, the cost of infrastructure is borne by the real estate development community (and its renter and homebuying customers) rather than by the taxpaying community at large.

A second important result of constrained local government budgets has been "fiscal" zoning, whereby land use decision makers approve those land uses perceived as fiscal winners rather than losers. Unfortunately, this often results in land use designations which encourage commercial or industrial development. Residential development, especially multifamily rental, is perceived as a fiscal loser (even though this perception is often not accurate).

To compound the complexity of the development process, developers of residential projects must often cope with a host of on-site issues, ranging from poor soil conditions to toxic or hazardous waste to seismic constraints. All of these conditions can add to the cost of housing production.

Affordable Housing Development in California

In addition to the above items that affect all kinds of residential development in California, there are several unique attributes that impact affordable housing production throughout the State. One of the main stumbling blocks that affordable housing proposals face is Article 34 of the California State Constitution, which requires voter approval of certain housing projects that receive state funds.

Another critical potential obstacle to the production of affordable housing in California is the complicated financial structure that a sponsor needs to assemble. Typically, an affordable project will have a permanent loan from a conventional lender (often with a subsidized interest rate through the Federal Home Loan Bank's Affordable Housing Program). The project will typically also have one or more subordinated loans from the local government, a subordinated loan from the State, and equity derived from syndication of low-income housing tax credits. In addition to these permanent sources, a project will often have one or more pre-development loans and a construction loan from a conventional lender. It is not uncommon to find affordable housing projects that have used eight or more permanent and interim sources of financing during the course of the project's development.

In addition to relying on a number of different sources of financing, affordable housing developers must also work with financing sources that change over a fairly short period of time. During the past several years in California, most new construction affordable housing projects have used a combination of State funds provided through the Rental Housing Construction Program (RHCP) administered by the State Department of Housing and Community Development (HCD), and low-income housing tax credits allocated by the State Tax Credit Allocation Committee (TCAC). Currently, HCD has allocated all of the funding available for RHCP, which was funded through a one-time general obligation bond approved by voters in 1990. Given the State's current fiscal crisis, it is highly unlikely that revenues to re-fund or replace RHCP will be generated in the near term. The low-income housing tax credit, a key component of many affordable projects built in California, also has an uncertain future because of the short-term nature of extensions passed by Congress to continue it.

There are also several other features of the California housing industry that serve to encourage the production of affordable housing. State law mandates that each local jurisdiction prepare a Housing Element, which essentially serves as a statement of policies and programs to promote the production of new and rehabilitated affordable housing. In addition, many cities and counties in the State have active Redevelopment Agencies, which are required to set aside 20 percent of their revenues for affordable housing production. Also, many cities have enacted density bonus ordinances, which grant additional units if a project includes proscribed ratios of affordable to market rate units. Finally, California has had an active network of non-profit housing development organizations; many of these groups have evolved into highly expert producers of countless affordable projects, and have served as models to fledgling non-profits across the country.

METHODOLOGY

The methodology used for this Study consisted of the following steps:

1. Definition of Affordable and Market Rate Projects
2. Selection of Geographic Areas
3. Project Identification
4. Survey Instrument Design
5. Developer Contact
6. Survey Administration
7. Quality Rating Assignment
8. Data Base Creation
9. Data Analysis

Definition of Affordable and Market Rate Projects

The Study process began with a cooperative effort between Bay Area Economics, LISC and TCAC staff, and the Task Force to define the kinds of projects that would be the subject of the Study. Specifically, affordable projects were defined as those projects that were originally conceived and developed to serve low and moderate income rental households and that received some form of public subsidy. Market rate projects, in contrast, were defined as those housing developments that were built to be rented on the open market. In general, market rate projects do not receive public subsidies, except in the case of those projects which participated in the California Housing Finance Authority bond program (often referred to as the "80/20" bond program); this program requires that 20 percent of the units be rented to low and moderate income households. These projects are classified as market rate projects since they are primarily offered as market rate projects and built to market rate standards.

Further, the projects to be analyzed in the Study were limited to newly constructed rental projects, rather than rehabilitated projects. This limitation was made in order to narrow the focus to a manageable universe of projects facing a similar set of production issues. Rehabilitated projects for all income levels can incur many costs which are unique to the particular structure, such as historic preservation, seismic retrofitting, and general structural obsolescence. Thus, rehabilitation projects were not incorporated into this Study.

Selection of Geographic Areas

Initially, four urban areas of California were selected through a discussion with LISC and TCAC staff, the Study Task Force, and Bay Area Economics. The areas (Bay Area, Los Angeles, Fresno, and San Diego) were selected to represent both areas where numerous affordable projects have been completed as well as areas where fewer projects were available but development costs were also likely to be lower. Thought was also given to northern versus southern California as well as coastal versus inland communities.

This set of areas was then further refined to allow for an urban/suburban cost comparison. For the Bay Area, this framework translated into defining San Francisco and Southern Alameda County as the urban/suburban locations. For the Los Angeles region, the framework was refined to City of Los Angeles (urban) and Riverside County (suburban). For San Diego and Fresno, both the lack of sufficient numbers of recently completed affordable projects as well as the relatively low density development pattern throughout the areas resulted in treating each of these areas as a unit rather than subareas with urban/suburban characteristics.

Thus, the final set of geographic areas selected for this Study is:

Bay Area Region
- City of San Francisco
- Southern Alameda County (west of East Bay Hills)

Fresno County

Los Angeles Region
- City of Los Angeles
- Riverside County

San Diego County

Project Identification

Bay Area Economics set forth several criteria, in consultation with the Task Force, LISC, and TCAC, to identify and screen potential participating projects. The goal of the screening process was to generate pairs of affordable and market rate projects that matched as closely as possible with respect to certain selected criteria. This pairing process helps avoid the "apples and oranges" comparison problem that can occur when analyzing real estate projects.

In general, the approach was to first identify the universe of affordable projects potentially available within the prescribed geographic areas, and then find comparable market rate projects. In the case of Los Angeles, where the large number of affordable projects outweighed the number of known market rate projects, the process was reversed: market rate projects were first identified, followed by the selection of comparable affordable projects.

To identify affordable projects, Bay Area Economics obtained lists of recently completed projects from the California State Tax Credit Allocation Committee; local planning, housing and community development departments; redevelopment agencies; local non-profit housing sponsors; local building industry associations; and private developers. Market rate projects were identified using many of these same sources in addition to local newspaper "for-rent" advertisements, appraisers, and real estate lending departments of banks active in the Study areas.

To obtain matched pairs of projects, Bay Area Economics employed the following criteria:

- Geographic Area (city and neighborhood, where possible)
- Completion Date
- Size and Density
- Construction Type

- Housing Type
- Parking Type
- Financing Sources
- Bedroom Mix

Initially, a large number of project sponsors were contacted to ascertain the characteristics of each possible project with respect to the selection criteria. Following the initial screening of each project, preliminary pairings were made, cooperation of each project sponsor was requested, and adjustments to the sample pool were made if cooperation could not be obtained. Each of the selection criteria is discussed below in detail.

Geographic Area. Projects were identified only if they are located within the six study areas listed above. Since there is a wide range of neighborhood characteristics within each area, pairs within the same city were preferred over potential pairing of projects in different communities. Such pairings within a limited area offer better control of potential cost differences that might arise due to differences in local fees, permitting processes, and design review requirements across local jurisdictions. Exact pairings of an affordable and market rate project within the same legal jurisdiction were not always possible, and therefore care was taken to select a market rate project from the most comparable nearby community.

When possible, pairings were made in the same general neighborhood within a legal jurisdiction to control for cost differences due to land costs, soil and site characteristics, neighborhood density, and security issues. When exact matches within the same neighborhood were not possible, the most comparable nearby neighborhood was used.

Completion Date. To assure comparable construction cost data, projects completed after January 1990 were selected. There were two exceptions to this criterion; these were made due to the limited pool of potential recently completed projects, particularly in the market rate category. In the case of each exception, the project was completed during or at the end of 1989. Projects that are currently under construction were not accepted into the sample, with two exceptions; these projects were both more than 90 percent complete at the time of the cost survey.

Size and Density. Total units and units per acre were key variables in establishing matched pairs of projects. Using these factors assists in controlling for economies of scale and cost variations based upon design and construction considerations that are directly related to size and density. For example, at densities less than 25 units per acre, parking is often provided in carports or open lots. When projects reach 40 units per acre, structured parking is usually required, resulting in higher costs due to more expensive garage construction.

Type of Construction. Generally, affordable and market rate projects with Type V wood frame construction were selected for this study. In one market rate case (SFMR1), Type I concrete construction was used for a portion of project, potentially raising costs relative to its wood-frame affordable counterpart.

Housing Type. Almost all projects selected for this study were built as rental units. Four market rate developments, however, were built to condominium specifications and two of these were

actually sold as condominiums. In the two cases of market rate projects built to condo specifications but not sold as such, one was done so at the request of the local permitting agency. In the two cases of condominiums offered for sale, an adjustment to reported costs consisting of eliminating the marketing costs was made. Condominium marketing costs consist largely of sales commissions, and are therefore an overstatement of costs compared to rental projects. Ideally, another adjustment to construction costs should be made in the case of condominium projects to account for higher quality construction standards required by building codes and lenders of permanent condominium mortgages. This type of adjustment was not made to the data contained in this report, but is discussed in the analysis of project pairs (See Appendix).

Bedroom Mix. When possible, affordable projects were matched according to overall mix of bedrooms. This was the most difficult variable to match projects against. Market rate apartments tend to be built for young households without children, and contain predominantly one and two bedroom units. In contrast, many affordable projects in the sample were designed for larger families, and contained a broader mix of one, two, three, and even four bedroom units. Several other affordable projects in the sample were designed for elderly households, resulting in a mix of smaller units (i.e., studios and/or one bedroom units). To account for unit mix differences within the sample, the analytical approach taken in this Study incorporates a "per-person housed" measure (see Measurement of Cost Section).

Parking. For each project, the type of parking was identified (e.g. structured garage below or at grade, separate garage, carport, or open lot). Typically, parking tended to be of the same type within each community. In San Francisco and Los Angeles, structured parking was most common, while in Fresno and Riverside Counties carport or open parking was typical. In most cases, the pairs are well matched by parking type; when parking varied among a pair, the differences have been identified.

Financing. While pairs of affordable and market rate projects were not matched based upon financial characteristics, care was taken on the affordable side to include projects financed by a wide variety of housing programs. While most of the affordable projects received low-income housing tax credit assistance, several projects using HUD and/or local government financing sources have been included.

On the market rate side, several projects were used that participated in the State of California Housing Finance Authority bond program as mentioned above. Since these projects were built to lease primarily at market rates, they have been classified and included in the sample as market rate projects.

Survey Instrument Design

Bay Area Economics designed a ten-page project survey to collect data on the projects included in the sample. The survey instrument was designed to elicit both a quantitative description of each project as well as a qualitative narrative of the project's development history, so that costs can be analyzed in the context of project history, sponsorship, land acquisition, and site characteristics. In addition, study participants were asked to provide their own comments regarding factors that affected their project's costs, as well as suggested policies or actions that

could occur to lower the general cost of producing affordable housing in California. A copy of the full survey is included in Appendix A.

The survey form was drafted after reviewing similar forms used by the State of California Tax Credit Allocation Committee, a concurrent cost study sponsored by the U.S. Department of Housing and Urban Development, contractor bid forms, as well as Bay Area Economics' proprietary questionnaires. Members of the Study Task Force, including both non-profit and for-profit housing developers, reviewed and commented on the housing cost survey instrument. The survey was pretested on a non-profit sponsored multifamily project located in Los Angeles County just beyond the City boundary (not used in the sample analyzed herein).

Developer Contact

Once an appropriate match was made between an affordable and market rate project, Bay Area Economics proceeded to re-contact project developers to secure their participation in the Housing Cost Study. A letter explaining the project was sent to each developer outlining the purpose of the Study and the commitment of time needed to participate.

Survey Administration

The survey instrument was administered by telephone and by mail, depending on the time available by the project developer. In all cases, cost data were provided in writing by project developers. After completion of the survey by the developer, Bay Area Economics reviewed the information for completeness and consistency. Typically, a follow-up communication was made to ensure an accurate interpretation of data. When possible, cost data were verified by examining cost certifications submitted to the California Tax Credit Allocation Committee or HUD, or by contacting construction lenders.

On the whole, participation rates were excellent for non-profit developers and moderately successful for for-profit developers. For-profit builders of both affordable and market rate housing expressed concern over the time needed to complete the survey and the proprietary nature of their cost data. To expedite the collection of data, Bay Area Economics in many cases made on-site visits to market rate developers, reviewed project files, and completed the questionnaire, subject to review by the developer for accuracy. In some cases, when the developer declined to submit cost data, lender data were substituted.

Some market rate projects that were good matches with affordable projects were dropped from the sample when a developer declined to participate. These refusals would occur most typically after initial agreement to participate, receipt of the survey instrument, and even after scheduling of a telephone interview appointment. In the event of such a refusal, Bay Area Economics contacted the next best comparable market rate project.

Confidentiality. To secure developer participation, Bay Area Economics and LISC have agreed to keep proprietary information provided by developers confidential. Thus, this report does not identify projects or developers by name, nor does the report give specific location, size, or total cost data that might permit a reader to identify a project. Moreover, many of the project

developers were given an opportunity to review the written description of their project as presented in this report in order to ensure confidentiality.

In order to maintain the confidentiality of the data presented herein, it should be noted that all data are presented in terms of per unit, per bedroom, and per person housed. In this way, the total number of units, the bedroom mix, and other key variables have been omitted, preventing identification of the specific project based on its physical configuration. Furthermore, photographs, renderings, or floor plans of projects have not been included, even though they could have served to illustrate key findings.

Quality Rating Assignment

Each project was reviewed by the architectural consulting firm ARCH.Research in order to assign quality ratings to the overall project based upon an analysis of the building structure, unit amenities, and project features that service the entire development.

These features can vary by location and by market. Building, unit and project features have been defined as follows:

Building Features:

- Exterior finish materials, such as siding, roofing and trim
- Building openings such as windows, doors, skylights, bays, balconies and patios
- Building systems, such as elevators, sprinklers, security, heating and air conditioning
- Type of parking provided

Unit Amenities:

- Room sizes, number of bathrooms, separate dining area
- Wall finishes, ceiling height and trim quality
- Number and type of kitchen appliances and quality of cabinets and counter-tops
- Bathroom fixtures and finishes
- Inclusion of special features such as fireplaces, vaulted ceilings or wet bars

Project Features:

- Laundry rooms
- Community rooms
- Management office
- Pool, spa or sauna
- Recreation room with big screen television
- Landscaping, fountains and other water amenities
- Tot lots, day care centers or health clinics
- Retail or commercial uses as part of a mixed use development

Based on these general categories of features, each sample project was assigned an "above average," "average" or "below average" quality rating. Each of these quality ratings is explained in detail in Appendix B.

Data Base Creation

The Survey used for this Study collected an enormous amount of information on each project. In order to analyze the data, most of the responses were coded and entered into a simple Microsoft Excel data base. For cost data, three measures of each cost component were created: cost per unit, cost per bedroom, and cost per person housed. The following chapter describes the way each of these measures was analyzed and how each of these measures was calculated.

Data Analysis

Three analytical approaches were taken for this Study. First, the projects in the sample were analyzed on a regional and subregional basis to compare costs by geography. This analysis is expressed in terms of ranges of project costs (e.g., minimum and maximum cost per unit for San Francisco affordable projects) as well as in terms of averages within each group.

The second kind of analysis focused on project pairs. The presence or absence of certain kinds of projects in specific regions did not enable complete matching of all projects as pairs suitable for analysis. Instead, the total sample of projects was subdivided for pair analysis; certain projects were paired and other projects were not analyzed for this approach. Of the total sample of 35 market rate and affordable projects, 28 were paired and 7 were not analyzed in this manner.

The third analytical approach focused on special issues raised by the Task Force, or highlighted by the pair analysis. Special issues analyzed included project sponsorship, pre-development process, land costs, parking, financing, density, and quality. For each special issue, every effort was made to use the appropriate sample and analytical technique; thus, for some issues, the pairs were used because the issue involved testing differences between subsets of affordable projects vis-à-vis their market rate counterparts. Other special issues were analyzed using the entire sample.

MEASUREMENT OF COSTS

This Study uses several types of measures to express costs for the sample. In the development industry, cost per unit is one of the most commonly used ways to describe costs. This measure is flawed, however, if the units being compared are different sizes or contain different numbers of bedrooms and bathrooms. Even when unit costs are presented as averages for a project, if the two projects being compared have different proportions of one, two, and three bedroom units, the per unit measure can be misleading, creating and "apples and oranges" situation. For this reason, both a per bedroom and a per person housed measure were also used in this Study. The following section defines each measure.

Cost Per Unit

This measure divided total project cost for the cost component by the number of residential units in the project. Thus, confidentiality can be maintained because the total number of units is not provided to the reader. Resident manager units are counted as part of total units. Also, it should be noted that costs for common areas are counted in total costs.

Cost Per Bedroom

This measure was calculated by dividing the total costs by the total number of bedrooms in the project. It is important to note, however, that studios were considered as one bedroom units for purposes of calculating this measure; for this reason, this measure is presented herein but not analyzed in detail. Rather, a cost per person housed (see below) was formulated as a more accurate measurement.

Cost Per Person Housed

This is a key measure utilized for this Study. The per person housed measure was developed to account for the difference in bedroom mixes between some of the market rate and affordable projects, especially for those projects which had studios as well as one bedroom units. One way to distinguish between units with different numbers of bedrooms (and between studios and other types of units) is to consider the number of people housed in the units.

For the Low Income Housing Tax Credit, the U.S. Congress has devised a standard regarding the relationship between number of bedrooms and people assumed to be housed in order to calculate the household size, household income, and subsequent rent applicable to a certain unit size. The LIHTC standard assumes that studios house only one person, while all other unit types house 1.5 persons per bedroom. It should be noted that for both market rate and affordable projects, the actual number of persons living in the units in the sample is not known; the standard is, however, believed to be relatively representative of actual occupancy, at least for affordable projects.

For each project in the sample, this standard was consistently applied. Thus, the number of potential persons housed was calculated by multiplying the number of studios by one person, and the number of bedrooms in all other unit sizes (e.g., one bedrooms and above) by 1.5 persons.

To facilitate comparison of project pairs later in this report (see Analysis of Project Pairs section), the persons housed in units were also expressed as averages, and the resulting average space per person (calculated by dividing average unit size by average number of persons per unit) is also described.

Cost Per Square Foot

Cost per square foot was not used in this Study because analysis of the data provided by project developers suggested that square foot data were inaccurately reported in many cases. This conclusion was reached because a number of projects reported unit sizes (based on detailed floor plan information) that, in total, exceeded the same developers' reported overall square footage for their project. In other cases, the reported detail for unit sizes plus common areas and parking garages was less than the reported total square feet. To correct this problem, full drawings for each project could be obtained; however, this was not undertaken for this Study due to time and budget constraints. The only square foot data that was considered reliable was the reported unit sizes; this detailed data was utilized in this Study to formulate average unit sizes for each project.

Unadjusted Versus Adjusted Costs

This Study presents both "unadjusted" and "adjusted" costs for the per unit, per bedroom, and per person housed measures. "Unadjusted" costs are the total reported costs for each measure. An "adjusted" cost is also presented for each cost measure to adjust for two major cost items that often vary significantly between market rate and affordable projects: land and development fees. These two cost items have been subtracted from the total costs for all of the projects in the sample to derive "adjusted" costs.

The "adjusted" cost approach enables a more accurate comparison of projects for several reasons. First, many affordable projects acquire land with some form of public subsidy, such as a partial or total land write down, resulting in little or no land costs; market rate projects typically do not receive a subsidy in this manner. In other cases, affordable project land costs are paid through long-term leases, not as lump sum purchase contracts. Moreover, two market rate projects in the sample reported land acquisition costs that did not reflect market value, due to either a protracted holding period of over ten years or purchase of land from related parties at below-market prices. To equalize all these variations in land costs accurately, a current market value for land would need to be imputed for each project. The Task Force and consultants determined that it would be too costly and time-consuming to impute market land values for each project; instead, reported land costs were subtracted from each project's costs as part of the "adjusted" cost calculation.

The second cost eliminated through the "adjusted" cost approach was development fees. Affordable and market rate developers receive compensation for developing a project in different ways. Many affordable developers incorporate a development fee (typically paid in whole or in part upon construction completion) into a project's development costs. Market rate developers

earn their compensation primarily from other sources, such as cash flow or project sale, and do not charge upfront fees as part of development costs. Nearly all of the affordable projects in the Study sample reported a development fee, while almost all of the market rate projects reported either no fee or only a nominal amount. To equalize these variations in the cost structure of affordable and market rate projects, development fees were subtracted as part of the "adjusted" cost calculation.

ASSUMPTIONS AND LIMITING CONDITIONS

Assumptions

The following assumptions apply to this study:

1. **The analytical focus of the Study is on adjusted costs.** Adjusted costs were calculated by subtracting land and developer fee/overhead from total costs. This was done to ensure comparability, as many affordable projects did not pay for land, or paid below market rates. In addition, many market rate projects had little or no development fee, because this is difficult to finance and does not represent the only source of profit from a project.

2. **To understand the findings of the Study, it is important to look beyond per unit cost comparisons.** Since any two projects, but particularly market rate compared with affordable projects, will typically vary with respect to unit sizes and number of bedrooms, a per unit measurement only portrays part of the story. The implications of only analyzing per unit costs in residential real estate are that the resulting comparisons are not "apples and apples," and are thus invalid by definition. To compensate for project differences, this Study relied on two other measurements for comparison purposes: per bedroom and per person housed (see Measurement of Cost section).

3. **It is assumed that "bottom line" total costs are the most valid data of all the cost data described in this report.** Individual reported line items and subtotals of cost components are less reliable because different sponsors define cost components differently, or accounting methods may not be accurate. Wherever possible, the analysis presented in this report seeks to recognize the greater reliability of "bottom line" costs.

4. **Only actual expenditures by project sponsors were considered.** The analysis does not account for indirect economic costs to society to produce either market rate or affordable housing. For example, the costs presented herein for affordable projects do not assign any cost to land write-downs, subsidized interest rates, or rent subsidies.

Limiting Conditions

The following limiting conditions apply to this study:

1. **All data and information regarding the housing projects described herein were obtained from sources considered reliable.** However, Bay Area Economics and ARCH.Research do not guarantee the reliability of the information contained in this report.

2. **All data and information was collected from project sponsors and lenders associated with the housing projects.** In order to obtain certain data, confidentiality has been assured. Bay Area Economics and ARCH.Research have made every effort to keep projects and their sponsors' identities confidential.

3. **The Study does not compare projects built in California to projects built in other parts of the country.** Generally, residential development in California is relatively expensive vis-à-vis many other parts of the U.S.; this topic and the reasons for it are not addressed herein.

4. **Each project in the sample was selected by the authors without any prior knowledge of its history or cost-effectiveness or related aspects.** Moreover, although the authors of this report provide consulting services across the spectrum of non-profit and for-profit organizations for all types of projects, they have had no involvement with any of the projects or developers included in this Study.

LITERATURE REVIEW

As part of the background research for this Study, a review of published literature regarding cost differentials between actual affordable and market-rate housing projects was undertaken. This review was conducted with the assistance of the State Department of Housing and Community Development librarians.

With one exception (the recently completed study completed by two U.C. Berkeley graduate students in April 1992 as described below), no published studies that addressed this issue were identified. Most of the existing literature addresses the issue of local, state and federal barriers to affordable housing or the cost impacts of the regulatory behavior of governmental agencies.

The literature review identified two types of reports that are related to the issues explored in this Study. First, there are several major U.S. government efforts during the past 15 years that take a policy approach to containing development costs for all types of housing. It is interesting to note that two of these reports, the *1978 Task Force on Housing Costs Final Report* and *1990 Advisory Commission on Regulatory Barriers to Affordable Housing Report* were both significant platforms for federal housing policy proposals, and yet neither report presented empirical evidence that the problems being addressed actually existed, other than anecdotal testimony.

The literature does contain several older studies evaluating the cost of development, financing, and operations of HUD housing programs. These studies are not reviewed herein due to their date and focus on HUD programs only.

The Cost of Affordable Housing: An Analysis of Development Costs, April 1992, prepared by two U.C. Berkeley graduate students with assistance from Bank of America State Bank, the California Tax Credit Allocation Committee, and the California Housing and Community Development Department, analyzed the development costs of market rate versus affordable housing projects within California. The study, which analyzed sixteen projects, had several methodological shortcomings, including a very limited sample size, lack of statewide geographical balance, no systematic matching of comparable projects, and a limited data collection process.

There has also been considerable recent media attention regarding the cost to produce affordable housing. For example, an article published in the *Los Angeles Business Journal* in January, 1992 compared the cost to construct two new housing projects serving low and moderate income households located near each other in Los Angeles. The article found the one being constructed by the for-profit developer to be substantially less expensive than the project being built by a non-profit developer. While the article raised important issues regarding the cost efficacy of affordable housing programs, it did not analyze the issue in a systematic fashion.

In addition to the present *California Affordable Housing Cost Study*, two other cost studies are planned or underway. The Los Angeles Community Redevelopment Agency is sponsoring a similar cost study limited to projects within Redevelopment Areas in Los Angeles. HUD has

commissioned a nationwide study, now in progress, of the cost to produce HUD affordable housing projects.

In summary, this Study represents an effort to document perceptions in an empirical manner. While the sample size of projects analyzed in this Study is limited and does not permit statistical analysis, the approach taken and the analytical framework presented can pave the way for further study of this important issue.

DESCRIPTION OF THE SAMPLE

This section provides an overview of the sample utilized for this Study. A total of 35 projects have been included in the sample for this Study (see Table 1). The 35 projects represent a total of 3,228 multifamily units containing 5,628 bedrooms and housing up to 8,312 people. The total reported development costs approach $274 million. A summary of all of the projects and their physical characteristics as well as a detailed description of each project is contained in Appendix C.

Table 1: Geographic Breakdown of Sample

Area	Number of Projects	No. Units	No. Bedrooms	No. Persons	Total Development Costs
City of San Francisco	7	536	813	1,217	$76,207,021
Southern Alameda County	4	358	548	831	34,375,992
Fresno County	4	506	1,078	1,617	22,037,609
City of Los Angeles	8	1,054	1,661	2,351	94,400,277
Riverside County	7	675	1,331	1,997	38,739,154
San Diego County	5	99	197	299	8,074,256
Total	35	3,228	5,628	8,312	$273,834,305

Project Type and Project Sponsor

Of the 35 projects in the sample, 20 are classified as affordable projects and 15 are classified as market rate projects. Of the affordable subset, eight were sponsored by for-profit developers and the remaining 12 projects were built by non-profit housing organizations (see Table 2).

Table 2: Breakdown by Type of Project and Developer

Area	Affordable		Market Rate	Total
	For-Profit Developer	Non-Profit Developer		
City of San Francisco	-	4	3	7
Southern Alameda County	-	2	2	4
Fresno County	2	-	2	4
City of Los Angeles	3	2	3	8
Riverside County	3	1	3	7
San Diego County	-	3	2	5
Total	8	12	15	35

There are clear geographic differences in the structure of the local affordable housing industry. Certain areas, such as the Bay Area, have a large number of active non-profit housing development organizations. Other areas, such as Fresno and Riverside Counties, have fewer active non-profits organizations, resulting in new affordable housing stock being constructed by for-profit developers. Within the City of Los Angeles both for- and non-profit developers are actively producing affordable housing.

Sources of Affordable Housing Financing

For the 20 affordable projects, the sources of financing reflect the age of the projects; since only projects completed since early 1990 were included in the sample, financing sources are dominated by the Low Income Housing Tax Credit and local government sources. These two sources of funds have been the predominant sources of funding for affordable housing for the past several years. Table 3 shows the permanent financing sources reported by each affordable project.

Table 3: Sources of Affordable Housing Financing

	No. of Affordable Projects
State/Federal Sources:	
Low Income Housing Tax Credit	14
Federal sources:	
HUD 202/other	5
Farmers Home Administration	1
Housing Development Action Grant	3
State Sources:	
HCD Residential Housing Construction Program	7
California Housing Finance Authority Bonds	2
Other State HCD Programs	2
Local Government Sources:	18

Project Size

The sample has been classified according to size, with "large" defined as 150 to 300 units, "medium" defined as 50 to 149 units, and "small" defined as under 50 units. Based upon this categorization scheme, the sample included eight "large" projects, 11 "medium" projects, and 16 "small" projects, as indicated in Table 4. There are fewer "large" projects than any other size category because the selection of the sample was driven by the size of the affordable projects, which tend to not exceed 150 units. Nevertheless, there are a sufficient number of large projects to permit a limited analysis of economies of scale for certain projects, as described later in this report.

Table 4: Breakdown of Project Size

Area	Large	Medium	Small	Total
City of San Francisco	1	1	5	7
Southern Alameda County	1	2	1	4
Fresno County	2	1	1	4
City of Los Angeles	3	1	4	8
Riverside County	1	6	0	7
San Diego County	0	0	5	5
Total	8	11	16	35

Breakdown of Projects by Unit Mix

The number of bedrooms in a unit can affect cost for a number of reasons to be elaborated later in this report. Table 5 shows the unit mix differences between market rate and affordable projects in the sample. The data represent the percentage of total units for market rate and affordable projects that are studio, one bedroom, two bedroom, and three or more bedroom units.

Table 5: Breakdown by Unit Mix

	Percent of Units by Number of Bedrooms				
Project Type	Studio	1-Bedroom	2-Bedroom	3+Bedroom	Total
Market Rate	-	54%	40%	6%	100%
Affordable	21%	17%	32%	29%	100%

The data indicate that market rate units tend to be one and two bedroom plans, while the affordable mix has a greater range, encompassing a larger proportion of studios and units with three or more bedrooms. None of the market rate projects offered studio apartments and very few market rate units contained three bedrooms or more (6 percent of total market rate units). In contrast, the total affordable sample contained 21 percent studios and 29 percent three or more bedroom units. The high percentage of studio units in affordable projects reflects the inclusion of several senior housing projects in the sample. Both market rate and affordable projects offered a large proportion of two bedroom units, 40 and 32 percent, respectively.

Unit mix was also analyzed at the project level. Table 6 indicates the number of projects in the sample by proportion of three or more bedroom units in the project unit mix.

Table 6: Number of Projects by Proportion of Three + Bedroom Units

Project Type	Less than 20% 3+ Bedrooms	Greater than 20% 3+ Bedrooms	Total
Market Rate	12	3	15
Affordable	6	14	20
Total	12	17	35

Of the twenty affordable projects, 14 have a unit mix with a significant proportion of three or more bedroom units. Only three market rate projects contained a significant proportion of three bedroom units. This sharp difference in unit mix supports the argument for exercising care in comparing the per unit cost of market rate and affordable projects. In a very real sense, the product is different, and per unit cost measures will be misleading. Per bedroom and per person housed cost measures provide better bases for comparison by adjusting for unit mix differences (see Measurement of Cost section).

Average Unit Size and Number of Persons Housed

A key variable in any analysis of cost is unit size, because larger units (and also units with more bedrooms) would generally be expected to be more expensive to produce, all other factors being equal. Table 7 presents the sample's average unit size and average number of persons housed per unit for each region. As mentioned previously, the average unit size data is based on detailed reported square footage by unit floor plan, and is considered reliable for analytical purposes.

Table 7: Average Unit Size and Persons Per Unit
By Region and Type

	Market Rate Projects	Affordable Projects
Average Unit Size		
City of San Francisco	934	774
Southern Alameda County	845	903
Fresno County	902	796
City of Los Angeles	778	734
Riverside County	712	792
San Diego County	917	878
Total Sample	830	775
Average Number of Persons Per Unit		
City of San Francisco	2.0	2.8
Southern Alameda County	1.9	3.4
Fresno County	3.0	3.4
City of Los Angeles	2.2	2.2
Riverside County	3.0	2.9
San Diego County	3.4	2.9
Total Sample	2.4	2.7

As indicated, market rate projects had a somewhat higher average unit size than affordable projects, 830 and 775 square feet respectively. There were some regional differences between project types, as well. For example, market rate projects in the San Francisco subset of the sample averaged 934 square feet, compared with only 774 square feet for the affordable group. The only areas where the affordable projects averaged higher square feet per unit were Southern Alameda County and Riverside.

On a per person housed basis, the variation between market rates and affordable projects is also evident. Market rate projects in the sample averaged 2.4 persons per unit overall, compared with 2.7 for the affordable set. The presence of more persons per unit and smaller average unit sizes for the affordable projects suggests that, as a group, affordable projects are using space more efficiently than market rate projects.

Construction Contracting Process

Table 8 indicates how construction contracts were structured for all projects in the sample.

Table 8: Number of Projects by Type of Construction Contract Process

Contracting Process	Affordable	Market Rate	Total
Own Contractor	3	6	9
Negotiated Bid	12	4	16
Competitive Bid	5	4	9
Not Reported	-	1	1
Total	20	15	35

As shown, affordable projects primarily relied upon a negotiated bid process, although interestingly, three of the affordable project developers served as their own contractors. The market rate projects showed a wide range of contractor arrangements; six market rate developers served as their own general contractors, four developers used a negotiated bid process, and four developers solicited competitive bids.

OVERVIEW OF REGIONAL DIFFERENCES

This section provides an overview of the sample projects grouped according to their location and type (i.e., market rate versus affordable). For each geographic region, both the range of total production costs and the averages by type of project are presented.

It is important to note that the emphasis of the analysis is on "adjusted total" production costs; that is, total production costs minus land and developer fee/developer overhead. This figure is considered the most valid basis for comparison between market rate and affordable projects for the reasons cited in the Methodology section.

It is also important to note that the following describes the project sample in terms of ranges of costs for different measures such as per unit, etc. The range analysis was conducted to identify minimum and maximum costs for each measure independently from each other measure, so that the project with the lowest cost per unit in San Francisco is not necessarily the same project as the one with the lowest cost per bedroom.

Bay Area Region

Urban versus Suburban Projects. As shown in Table 9, the Bay Area Region illustrates the expected differences between housing production costs in the dense central city (i.e., San Francisco) compared to the less dense, suburban communities of Southern Alameda County situated west of the East Bay hills. The differences in production costs for all types of projects between urban San Francisco and suburban Southern Alameda are greater than between market rate and affordable projects within each subarea. For example, the most expensive market rate project's total cost per unit in San Francisco exceeds $214,000, while its counterpart in Southern Alameda is slightly more than $116,000 per unit. Land cost does not account for all of this gap; the same projects' per unit costs on an adjusted basis (excluding land and developer fee/overhead) are still about $183,000 in San Francisco versus $97,000 in Southern Alameda.

The same pattern of higher urban costs generally holds true for affordable projects in the Bay Area Region sample. However, it is interesting to note that on a per unit (adjusted) basis, the least costly affordable San Francisco project is actually slightly lower in cost than its Southern Alameda counterpart, due to the presence of a San Francisco affordable project with small units in the sample.

San Francisco By Type (Adjusted Totals). For all measures, the affordable projects start at a lower cost point on an adjusted total basis. Perhaps most importantly, the per person measure indicates that affordable projects in San Francisco are being produced at a wide range of cost, starting at about $36,000 per person up to just over $77,000 per person (adjusted). On an average per person basis, the affordable projects are substantially more cost-effective; the average cost per person housed by affordable projects is only $48,000 compared to almost $59,000 for market rate projects.

Southern Alameda County By Type (Adjusted Totals). The pattern between market rate and affordable projects in Southern Alameda County is similar to that observed in San Francisco. Here, per unit (adjusted) costs start out lower for market rate projects than for affordable ($64,000 versus $74,000), but the market rate sample range ends at a higher point than the affordable group ($97,000 versus $92,000). On a per person basis, the affordable range is considerably lower than the market rate range. This is reflected in the average cost per person housed, which is only $32,000 for the affordable projects compared to over $43,000 for the market rate group.

Table 9: Overview of the Bay Area Region

San Francisco	Market Rate		Affordable	
	Minimum	Maximum	Minimum	Maximum
Total Costs				
Per Unit	$131,902	$214,293	$79,698	$210,546
Per Bedroom	$99,068	$214,293	$67,918	$79,698
Per Person	$66,045	$74,366	$45,279	$78,433
Adjusted Total Costs				
Per Unit	**$99,473**	**$182,990**	**$78,252**	**$172,339**
Per Bedroom	**$99,473**	**$182,990**	**$53,763**	**$78,252**
Per Person	**$49,667**	**$63,504**	**$35,842**	**$77,010**
Average Adjusted Total Costs				
Per Unit	**$143,821**		**$125,936**	
Per Bedroom	**$111,121**		**$62,529**	
Per Person	**$55,831**		**$47,897**	
Number of Projects	**3**		**4**	

Southern Alameda County	Market Rate		Affordable	
	Minimum	Maximum	Minimum	Maximum
Total Costs				
Per Unit	$68,788	$116,356	$80,882	$107,570
Per Bedroom	$45,859	$103,911	$33,161	$77,895
Per Person	$30,572	$69,274	$21,464	$51,930
Adjusted Total Costs				
Per Unit	**$64,305**	**$97,397**	**$74,179**	**$91,856**
Per Bedroom	**$42,870**	**$86,980**	**$30,414**	**$66,516**
Per Person	**$28,580**	**$57,987**	**$19,685**	**$44,344**
Average Adjusted Total Costs				
Per Unit	**$80,851**		**$83,017**	
Per Bedroom	**$64,925**		**$48,465**	
Per Person	**$43,283**		**$32,015**	
Number of Projects	**2**		**2**	

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Fresno Region

The Fresno region's sample was not disaggregated by urban and suburban projects, due to the relatively low density development pattern of the City of Fresno and its environs. It should be noted that three of the four Fresno projects used in this Study were in the City of Fresno, while the fourth was located in another, smaller incorporated community within the County.

Fresno By Type (Adjusted Totals). Fresno is an area where residential development is still relatively inexpensive by California standards. This is reflected in the data for both market rate and affordable projects. As shown in Table 10, the range of costs for market rate and affordable projects are generally similar. The lowest market rate project costs $35,000 per unit (adjusted), while the lowest affordable project costs $34,000 per unit. At the high end of the range, the data are remarkably consistent; the highest market rate project is about $45,000 per unit, and the highest affordable project is also about $45,000 per unit. It is important to note that all four projects constituting the Fresno sample were developed by for-profit organizations.

On a per person housed basis, the affordable projects appear to be more cost effective, ranging from $10,000 to just over $12,000 per person, compared to the market rate range of about $13,000 to $14,000 per person. This cost-effectiveness is also reflected in the average figures; the affordable projects averaged $11,000 per person housed compared to $13,500 for the market rate group.

Table 10: Overview of Fresno County

	Market Rate		Affordable	
	Minimum	Maximum	Minimum	Maximum
Total Costs				
Per Unit	$40,258	$54,314	$37,563	$55,488
Per Bedroom	$22,849	$24,688	$16,678	$22,919
Per Person	$15,233	$16,459	$11,119	$15,279
Adjusted Total Costs				
Per Unit	**$35,099**	**$45,439**	**$33,829**	**$45,275**
Per Bedroom	**$19,921**	**$20,654**	**$15,020**	**$18,701**
Per Person	**$13,281**	**$13,769**	**$10,013**	**$12,467**
Average Adjusted Total Costs				
Per Unit	**$40,269**		**$39,552**	
Per Bedroom	**$20,288**		**$16,860**	
Per Person	**$13,525**		**$11,240**	
Number of Projects	**2**		**2**	

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Los Angeles Region

Urban versus Suburban Projects. As in the Bay Area Region, the Los Angeles Region data reflect the overall higher cost of producing any type of residential project in an urban area. As shown in Table 11, total costs to produce market rate projects in Los Angeles (the urban subarea) were as high as $118,000 per unit, while their market rate counterparts in Riverside County (the suburban subarea) approached only $57,000 per unit. This pattern holds across all measures for market rate projects. On a per person total cost basis, the highest urban project was more than double its suburban counterpart. Even when the market rate projects are adjusted for land costs and developer fee/overhead, the urban group of market rate projects are still substantially more expensive than their suburban counterparts across all measures analyzed.

For affordable projects in urban versus suburban locations, the pattern also holds true, albeit a little less dramatically than for the market rate sample. Affordable projects in the City of Los Angeles ranged from $74,000 to $156,000 per unit for total costs, while their suburban counterparts ranged from $48,000 to $91,000 per unit. Even when adjusted for land costs and developer fee/overhead, the highest urban affordable project was still $106,000 per unit compared to the highest suburban affordable project at $73,000 per unit.

Los Angeles By Type (Adjusted Totals). As observed in San Francisco, the affordable projects in the Los Angeles subarea tend to be lower cost than their market rate comparisons. As shown in Table 11, the affordable projects averaged $80,000 per unit compared with $82,000 per unit for the market rate group. This gap broadens, however, for other measures. For example, on a per person basis, the affordable group appears to be particularly cost-effective, averaging $31,000 per person compared to $34,000 per person for the market rate group.

Riverside County By Type (Adjusted Totals). In Riverside County, the affordable group of projects does not compare as favorably with its market rate counterparts as in other areas analyzed in this Study. Here, the range of per unit costs begins at approximately the same point ($41,000 for both market rate and affordable projects) but escalates so that the high end of the range for market rate projects is only $44,000 per unit compared to $73,000 per unit for the affordable projects.

The cost-effectiveness of market rate projects in Riverside County is again reflected in the range of costs per person. For market rate projects, the cost per person ranges from $11,000 to $19,000, while the affordable group ranges from $14,000 to more than $27,000. This disparity is repeated in the average costs; on a per person basis, the market rate group in Riverside County ($14,500) is 25 percent lower than the average for affordable projects ($20,000).

It should be noted that the disparity between the market rate and affordable projects in Riverside County is primarily influenced by the relatively high costs of one affordable project developed by a for-profit developer. There are a number of reasons why this project had relatively high costs, including a concentration of three bedroom units, site improvement issues (soil and drainage problems), a complex financing package, and high local government fees/permits. All of these issues are explored in more detail in the Special Issues section of this Study.

Table 11: Overview of the Los Angeles Region

City of Los Angeles	Market Rate		Affordable	
	Minimum	Maximum	Minimum	Maximum
Total Costs				
Per Unit	$87,731	$118,239	$74,309	$156,278
Per Bedroom	$44,990	$76,787	$35,151	$72,558
Per Person	$29,993	$51,191	$28,291	$52,446
Adjusted Total Costs				
Per Unit	**$69,813**	**$95,343**	**$51,252**	**$105,759**
Per Bedroom	**$35,801**	**$68,141**	**$28,994**	**$60,643**
Per Person	**$23,868**	**$45,427**	**$19,513**	**$44,846**
Average Adjusted Total Costs				
Per Unit	**$81,742**		**$80,109**	
Per Bedroom	**$50,662**		**$42,936**	
Per Person	**$33,775**		**$30,918**	
Number of Projects	**3**		**5**	

Riverside County	Market Rate		Affordable	
	Minimum	Maximum	Minimum	Maximum
Total Costs				
Per Unit	$44,238	$56,642	$47,643	$90,928
Per Bedroom	$17,236	$37,639	$25,470	$47,643
Per Person	$11,490	$25,093	$16,980	$31,762
Adjusted Total Costs				
Per Unit	**$40,655**	**$43,710**	**$41,234**	**$72,826**
Per Bedroom	**$15,840**	**$28,633**	**$20,791**	**$41,234**
Per Person	**$10,560**	**$19,089**	**$13,861**	**$27,490**
Average Adjusted Total Costs				
Per Unit	**$42,484**		**$60,031**	
Per Bedroom	**$21,825**		**$30,152**	
Per Person	**$14,550**		**$20,101**	
Number of Projects	**3**		**4**	

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

San Diego

The San Diego region's sample was not disaggregated by urban and suburban projects, due to the relatively low density development pattern of the City of San Diego and its environs. In addition, the volume of recently completed market rate and affordable multifamily housing projects did not permit a sufficient mix of projects to undertake an urban/suburban cost analysis. It should be noted that only one of the five San Diego projects used in this Study was located in the City; the remainder were split between three adjoining suburban communities.

San Diego By Type (Adjusted Totals). San Diego is considered a high cost housing market in California. This is reflected in the data for both market rate and affordable projects. As shown in Table 12, the range of costs for market rate projects is generally lower than affordable projects. The lowest market rate project starts at $54,000 per unit, while the lowest affordable project starts at almost $60,000 per unit. At the high end of the range, the market rate projects remain lower in cost. The highest market rate project is about $57,000 per unit, while the highest affordable project is about $74,000 per unit.

On a per person housed basis, the affordable projects begin to match the market rates, even though the range of costs per person housed is wider for affordable projects ($16,000 to $38,000). This cost difference for affordable projects is also reflected in the average figures; the affordable projects averaged $24,000 per person housed compared to $17,000 for the market rate group.

A variety of factors influenced the relatively high costs of the affordable housing projects in the San Diego sample. The two most expensive affordable projects were likely impacted by a high proportion of three bedroom units, relatively limited experience of the project developers, and lengthy HUD financing time periods. Site improvement costs and local government fees/permits were also relatively high for these two projects. Finally, the two most expensive affordable projects have a townhouse design, which likely added to their costs; however, it should be noted that one of the market rate projects also had a townhouse design, but held costs related to construction to a lower level than the affordable townhouses. All of these cost issues are explored in more detail in the Special Issues section of this Study.

Table 12: Overview of San Diego County

	Market Rate		Affordable	
	Minimum	Maximum	Minimum	Maximum
Total Costs				
Per Unit	$68,036	$72,001	$71,872	$119,047
Per Bedroom	$34,018	$34,972	$31,114	$63,886
Per Person	$19,903	$22,679	$20,743	$45,998
Adjusted Total Costs				
Per Unit	**$54,354**	**$56,925**	**$59,622**	**$74,290**
Per Bedroom	**$26,400**	**$28,463**	**$23,765**	**$52,998**
Per Person	**$15,025**	**$18,975**	**$15,844**	**$38,158**
Average Adjusted Total Costs				
Per Unit	**$55,639**		**$68,403**	
Per Bedroom	**$27,431**		**$33,842**	
Per Person	**$17,000**		**$23,504**	
Number of Projects	**2**		**3**	

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

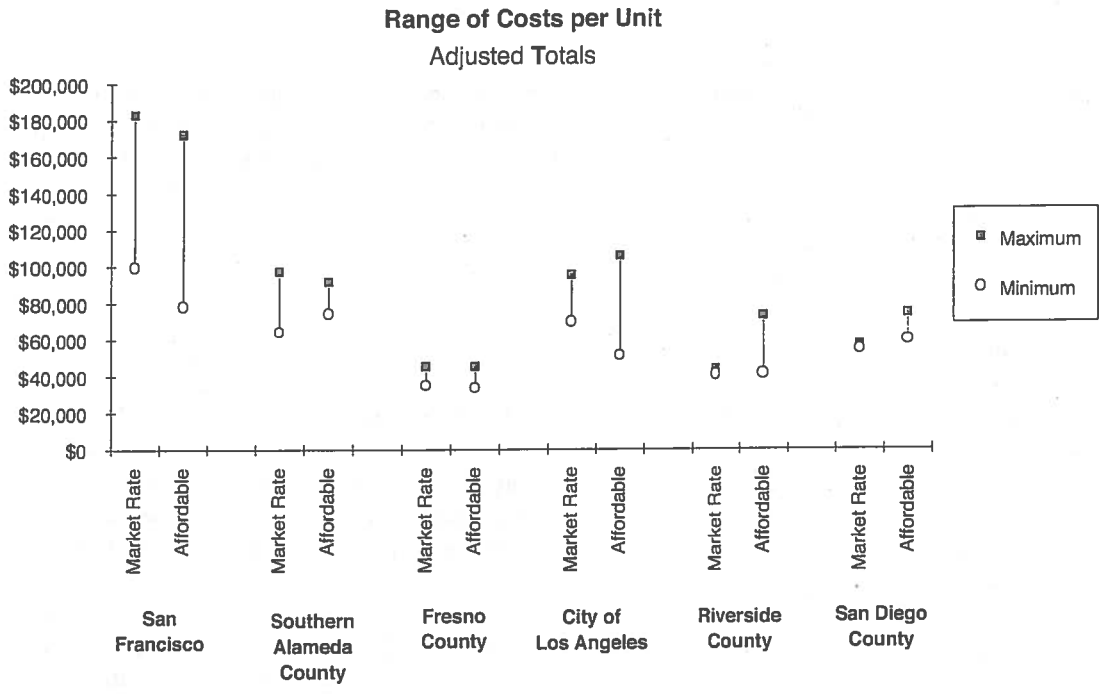
Summary

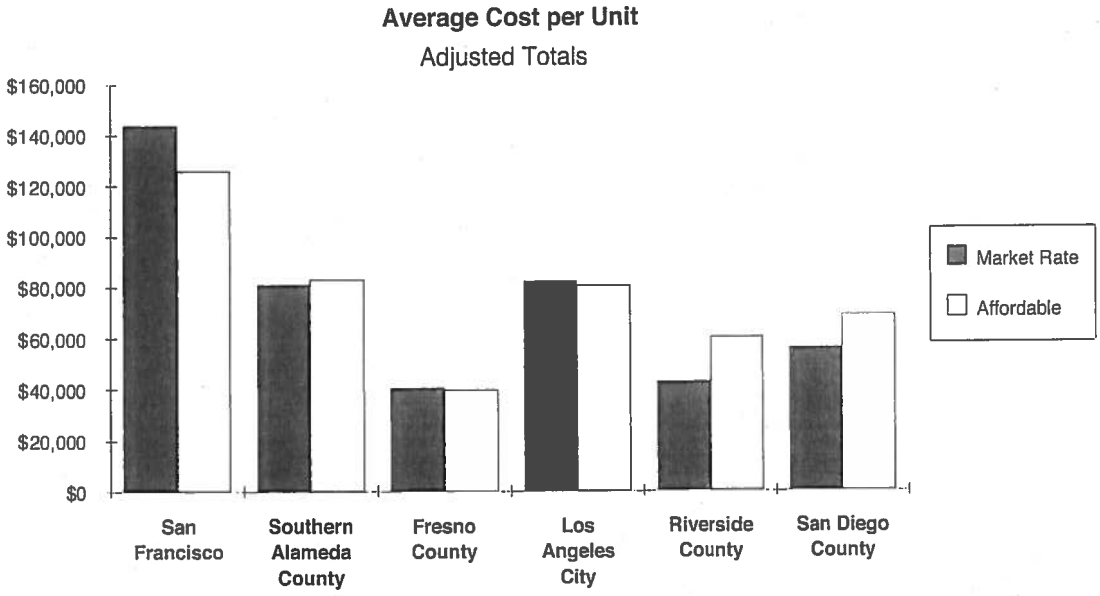
Urban versus Suburban Location. The data for each project, when grouped by range of cost for each measure, indicate clear differences between urban and suburban housing production costs, irrespective of whether the project serves market rate or low income households. This is true for the sample projects from San Francisco versus Southern Alameda County as well as for the sample projects from the City of Los Angeles versus Riverside County. Of the four regions surveyed, Fresno has the least expensive range of unit costs as well as the least expensive average costs, irrespective of type of household served.

Per Unit Cost Ranges and Averages. On a per unit basis, the range of adjusted costs for the affordable projects were less than or equivalent to the range for the market rate sample (see Figure 1). This was true for the Bay Area region (both in San Francisco and in Southern Alameda County), and the Fresno region. In Southern California, however, per unit costs did not exhibit this pattern; affordable projects started below but ranged above their market rate counterparts in Los Angeles, and started at the same level and then ranged above market rate projects for Riverside County. In San Diego, the least expensive affordable project cost more than the highest market rate project.

The average of per unit costs (adjusted) for each geography expresses this finding in another way (see Figure 1). On average, San Francisco market rate projects exceeded their affordable counterparts. Market rate projects averaged almost the same as affordable projects for Southern Alameda County, the Fresno region, and the City of Los Angeles. Only in Riverside County and San Diego County did the affordable subset average higher than the market rate group on a per unit adjusted cost basis.

Figure 1: Summary of Regional Costs per Unit



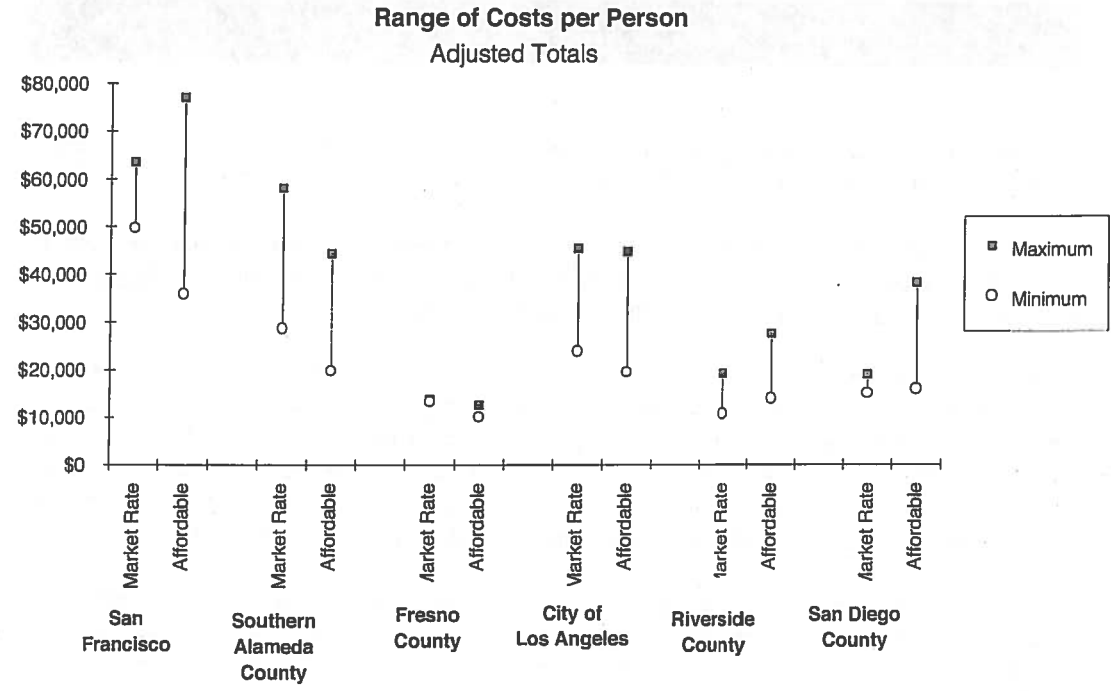


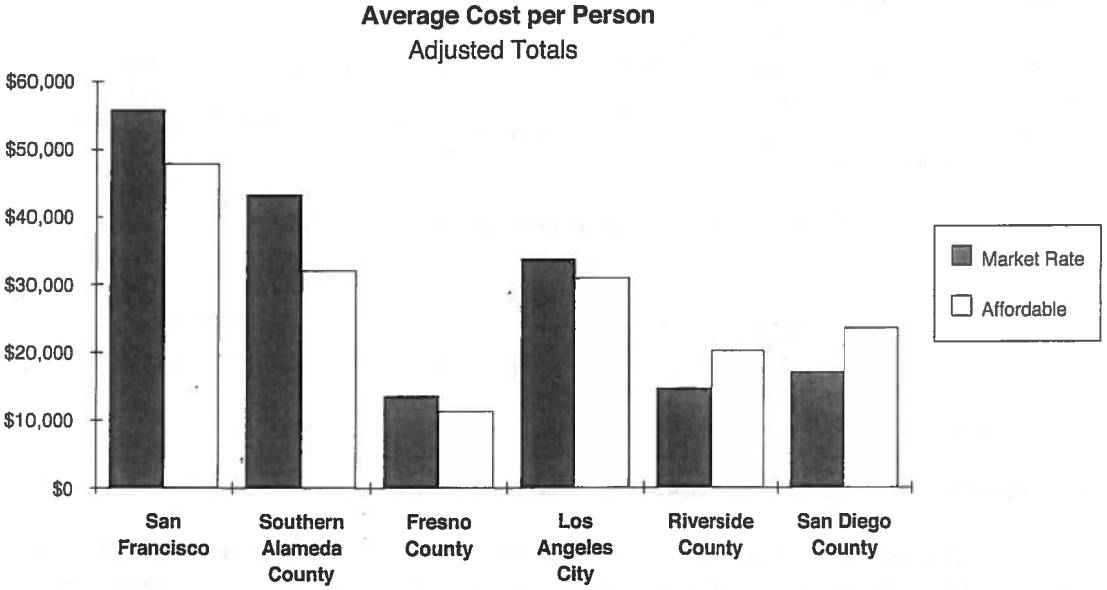
Per Person Cost Ranges and Averages. The performance of affordable and market rate projects in each region can be measured most accurately on a per person housed basis. As shown in Figure 2, the range of per person (adjusted) costs for all the affordable projects started at or below that for the market rate projects in San Francisco, Southern Alameda County, Fresno County, and the City of Los Angeles. In Southern Alameda County, Los Angeles City, and Fresno, the affordable range also ends at a lower level than the market rate group. Only in San Francisco, Riverside County, and San Diego did some of the affordable project costs exceed their market rate counterparts on a per person basis.

The average of per person costs expresses this finding another way, and underscores the pattern of regional differences. San Francisco, Southern Alameda County, Fresno, and Los Angeles all averaged lower adjusted costs per person housed for the affordable projects as a group compared to the market rate group, highlighting the relative efficiency of affordable projects in the sample. Only in Riverside and San Diego did the average affordable cost per person exceed the average for the market rate group; these averages are impacted by one relatively high cost affordable project of the three analyzed for Riverside and two out of three affordable projects in San Diego.

These findings counter the perception among some experts that affordable housing projects systematically have higher productions costs. Indeed, sample affordable projects in certain regions of California performed better than their market rate counterparts, both on a per unit and per person housed basis. Only in Riverside and San Diego did the perceived pattern of more expensive affordable projects appear to hold, at least at the high end of the range of costs. Some of the factors affecting the affordable projects in these regions such as site improvement costs, design issues, high concentrations of three bedroom units, and local government fees/permits., and the organizational status of the project sponsor are explored further in the Special Issues section of this Study.

Figure 2: Summary of Regional Costs per Person





ANALYSIS OF PROJECT PAIRS

This section presents a summary of an analysis of 14 pairs of projects culled from the larger sample. A detailed comparison for each of the 14 pairs is contained in Appendix D.

Each pairing was made intentionally as part of the sample selection (see Methodology Section); it is important to note that the criteria used to match the pairs did not include any cost data and the matching of the pairs was done prior to any cost data collection.

Projects in each pair were selected to match each other as closely as possible for key characteristics including geographic location, housing type, total size and density, date of completion, parking type, construction type, quality, and bedroom mix. It should be noted that the pairs presented herein, while not perfectly matched, have enough similar characteristics to make a cost comparison meaningful. Characteristics that are different between projects in the pair are explicitly noted in the detailed discussion of each pair contained in Appendix D.

Since the pairs of projects have been closely matched by the criteria set forth in the Methodology Section, variability between projects in each pair has been controlled as much as possible. Therefore, the following discussion should be viewed as a more detailed look at the most refined set of data collected for this Study.

Comparison of Total (Adjusted) Costs

A comparison of the total (adjusted) costs for each of the 14 pairs (see Table 13 below) shows the wide range of cost difference experienced by some of the pairs when analyzed from the perspective of the affordable projects. This wide range of difference was evidenced both on a per unit and per person housed basis.

Table 13: Summary of Total Costs for Project Pairs
Adjusted Totals

	Range of Difference Aff vs. Mkt Rate	# of Affordable Below Mkt Rate	# of Affordable Above Mkt Rate
Cost Per Unit	-30% to 66%	5	9
Cost Per Person Housed	-42% to 44%	9	5

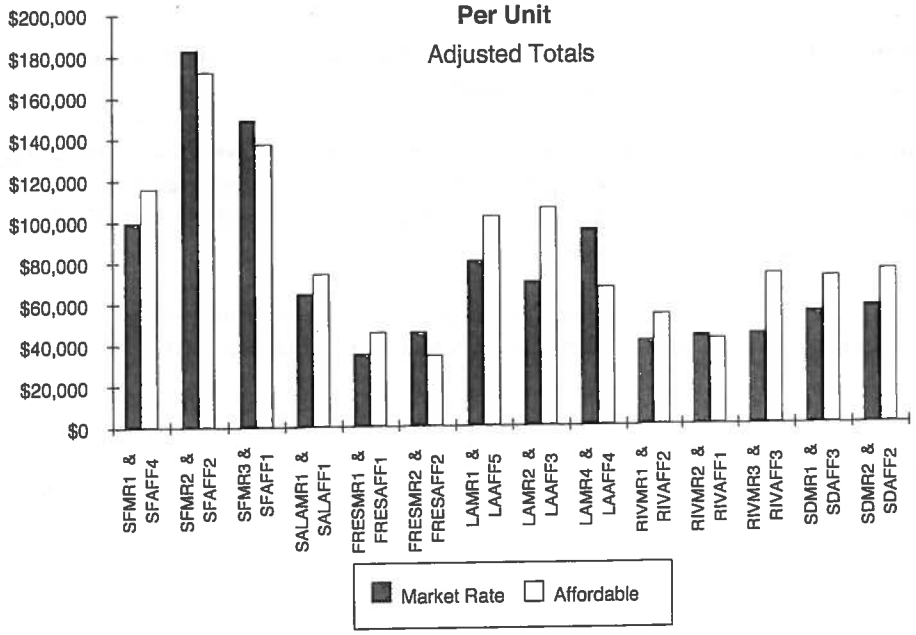
These data reinforce the finding from the previous Regional Overview that there is no systematic pattern of affordable projects costing more or less than market rate projects. The analysis shown above, which takes into account the carefully matched pairing of similar projects, suggests that on both a cost per unit and a cost per person basis, variations abound. On a cost per unit basis, affordable projects ranged from 30 percent less expensive than their market rate counterparts to

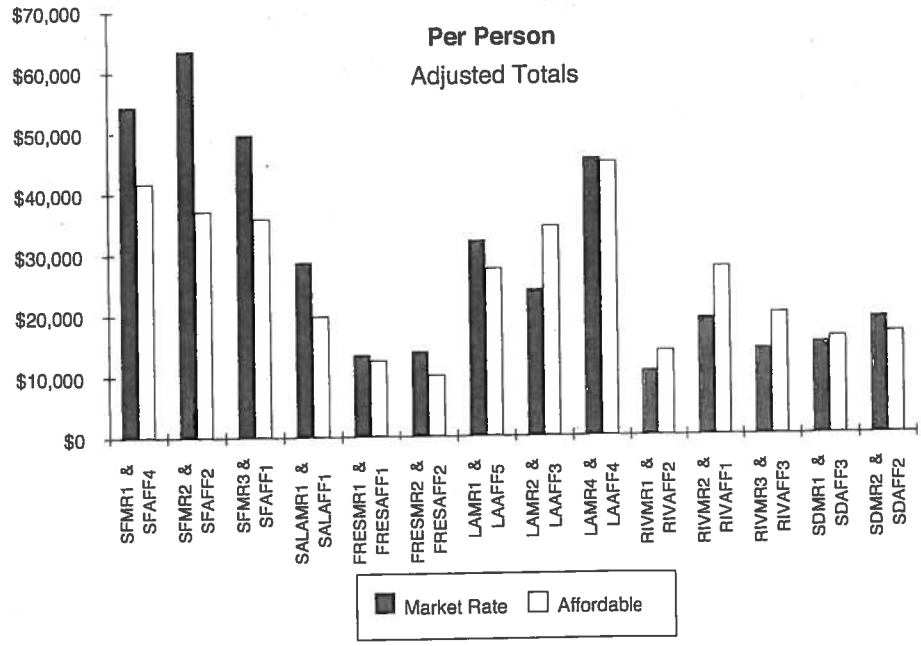
66 percent more expensive. Five of the fourteen pairs analyzed had affordable units that cost less than their market rate comparison on a per unit basis.

On a per person housed basis, the situation reverses, but there is still a wide range of performance. Costs per person ranged from affordable projects being 42 percent lower than their market rate counterparts to 44 percent above. Nine of the 14 affordable projects cost less to build than their market rate counterparts, while 5 cost more.

The cost relationship between each project pair is graphically depicted in Figure 3 which shows per unit total costs (adjusted) for each of the 14 pairs as well as per person costs (adjusted).

Figure 3: Summary of Per Unit and Per Person Adjusted Total Costs





Average Unit Size, Bedroom Mix, and Cost

The full case study analysis of each pair (see Appendix D) revealed that many factors were probably affecting the cost differences between each of the projects in the pairs. Because there are complex interrelationships between factors in any real estate development project, and the sample size for this Study is too small to be considered statistically valid, it is difficult to generalize about cause and effect for the projects as a group. Therefore, only several simple frequency counts and cross-tabulations of factors that may impact cost have been included in the following discussion.

Two factors which appear to directly impact the cost relationship between any two projects in the pairs are unit size and proportion of units with three or more bedrooms. The following cross-tabulations illustrate these relationships.

Table 14: Comparison of Average Unit Size, Bedroom Mix, and Unit Cost
Adjusted Total

	Cost Per Unit		
	# of Aff Below Market Rate	# of Aff Above Market Rate	Total
Average Unit Size (Sq Ft)			
Aff Smaller Than Market Rate	5	2	7
Aff Larger Than Market Rate	0	7	7
Proportion of Three or More Bedrooms			
Aff Less/Same Than Market Rate	2	1	3
Aff More Than Market Rate	2	9	11

As shown, half of the 14 projects contained affordable projects with average unit sizes (in terms of square feet) that were smaller than their market rate comparison; the other half of the pairs contained projects where the affordable units were larger. For all of the affordable projects with larger average unit sizes, the costs per unit for the affordable projects were also higher. However, not all of the affordable projects with smaller average unit sizes had lower costs; two affordable projects with smaller units still cost more than their market rate counterparts. These two projects, SFAFF4 and RIVAFF2, appear to be affected by other factors, including a higher concentration of three or more bedroom units (SFAFF4), unique designs (SFAFF4 has lofts and RIVAFF2 contains townhouses), a high proportion of bathrooms per unit (RIVAFF2), and higher site improvement costs vis-à-vis the market rate comparisons (both projects).

The number of bedrooms in units also appears to impact costs. As shown above, in eleven of the pairs, the affordable project had a higher proportion of three or more bedroom units than its counterpart; in nine of these cases, the affordable project also had higher costs per unit. Two affordable projects had a higher concentration of three or more bedroom units, and still cost less per unit than their market rate comparisons. One affordable project had the same proportion of

bedrooms as its counterpart (neither had three bedroom units), but still cost more per unit. These patterns suggest that per unit costs for projects with a higher proportion of three or more bedroom units can be impacted by the bedroom mix, although the pattern is not true in all cases. It should be noted that the bedroom mix in the sample projects did not always correspond to average unit size; some projects had more three bedroom units but still maintained an overall lower average unit size (due to more efficient use of space in the affordable projects). Thus, unit size (in terms of square feet) and bedroom mix should be viewed as distinct factors with separate impacts on cost. Future research with a larger study sample should explore the causal relationships between unit size, bedroom mix, and unit cost in more detail to ascertain a statistically valid finding.

Physical Characteristics and Components of Cost

The analysis of individual project pairs (see Appendix D) suggests that even though average unit size and bedroom mix may be the strongest factors affecting cost differences, there are a variety of other factors which occurred in the projects' development process that also affected costs. As a result, the magnitude of difference between costs may vary significantly from the magnitude of difference between unit sizes; for example, there are two pairs where the average affordable unit was only 10 to 15 percent larger than the average market rate unit, but the adjusted total costs were more than 50 percent higher per unit, and there is one pair where the size of the affordable units averaged 12 percent smaller than the market rate units, but the per unit adjusted total cost was 30 percent lower. Moreover, in some cases, a combination of factors appeared to cancel each other out, resulting in projects that appeared similar in cost but actually had widely diverging cost components.

Because of these patterns that emerged from the detailed analysis, a summary of physical characteristics and cost component comparisons was conducted, as shown below.

Table 15: Comparison of Physical Characteristics and Cost Components

	Average		# of Aff Projects	
	Mkt Rate	Affordable	Below Mkt Rate	Above Mkt Rate
Project Characteristics				
Sq Ft/Unit	883	875	7	7
Persons/Unit	2.83	3.43	2	12
Sq Ft/Person	324	272	9	5
Bathrooms/Unit	1.48	1.50	7	7
	Aff vs. Mkt Rate Range of Difference			
Cost Per Person				
Construction	-42% to 45%		9	5
On- & Off-Site	-76% to 1194%		6	7
Total Loan	-100% to 214%		11	2
Syndication	-25% to 2154%		1	11
Total Soft	-49% to 121%		6	8
Reserves	NA		1	9
Development Fee	-100% to 1083%		2	10
Land	-100% to 169%		9	5

Physical Characteristics. The physical characteristics of projects show some interesting patterns. On average, the unit sizes for market rate and affordable projects were nearly the same, with the number of affordable projects with larger and smaller unit sizes than their comparison evenly divided - half of the affordable projects had average unit sizes smaller than their market rate counterpart, and half had larger average unit sizes. The average number of persons per unit varied more substantially. Twelve out of the 14 affordable projects had more people housed per unit than their market rate counterparts, resulting in an average number of persons housed for all of the affordable projects of 3.43 per unit, compared to only 2.83 for the market rate group. This translated into a pattern whereby the affordable projects had fewer square feet per person. In other words, the affordable projects tended to house more people per unit and allocate less space per each person, suggesting a space efficiency compared to market rate projects, which is reinforced by the per person cost analysis described above.

The average number of bathrooms per unit, also shown in Table 15, shows very little difference between the affordable and market rate projects. As a group, the affordable projects averaged 1.50 bathrooms per unit, compared with 1.48 bathrooms per unit for the market rate group of projects. In terms of frequency, seven out of the 14 affordable projects had fewer bathrooms per unit than their market rate counterparts.

Components of Cost. Because average unit size and bedroom mix have already been established as the primary reasons for varying per unit costs, this section analyzes the per person costs for each cost component. This approach is taken in order to minimize variability caused simply by unit size.

Construction Costs. As shown in Table 15, construction costs vary widely. Affordable projects cost from 42 percent less to 45 percent more than their market rate counterparts on a per person basis. Nine out of the 14 affordable projects cost less, while five cost more. This closely matches the overall finding of relative cost-effectiveness when these projects are evaluated on a per person housed basis.

On- and Off-Site Costs. For this cost component, the range of difference between affordable and market rate projects in the pairs was very broad; affordable projects were 76 percent less expensive to over 1,000 percent more expensive than their comparisons. In terms of frequency, however, this pattern was more balanced; six of the affordable projects had lower on- and off-site improvement costs than their counterpart, and seven had higher costs. Factors which influenced these patterns were included irregularly shaped sites, toxic materials, or lack of on- and off-site infrastructure.

Loan Costs. This is one of the only cost components where affordable projects clearly demonstrated lower per person costs than market rate projects. The lower affordable costs were primarily due to the below-market rate nature of many financing programs available for affordable housing. Eleven out of the 14 affordable projects had lower per person loan costs than their market rate comparisons.

Syndication. This cost component is somewhat misleading because most of the market rate projects did not use syndication to raise equity funds, so they did not incur or report costs associated with syndication. On a per person basis, eleven out of 14 affordable projects had higher syndication costs than their market rate counterpart; for the remaining three pairs, one market rate project reported higher syndication costs and two pairs reported no syndication costs.

Soft Costs. The range of difference between affordable and market rate projects for soft costs was -49 to 121 percent. Six out of 14 affordable projects had lower per person soft costs than their comparisons, and eight had higher costs. There are numerous reasons for the higher affordable soft costs suggested by the detailed pairs analysis, including more extensive architectural and engineering costs, higher local government fees and permit charges, and varying legal fees. The nature of A & E costs and local government fees/permits are explored in more detail in the next section.

Reserves. For this component, affordable projects appear to be clearly experiencing a higher cost, even on a per person basis. Nine out of the 10 affordable projects that reported reserve costs had higher reserve costs per person than their counterparts. This pattern is predictable, given the reserve requirements required by lenders and governmental entities involved in financing affordable projects. Moreover, since affordable projects' rental revenues are restricted (by income levels), the economics of affordable housing generally result in very constrained net operating

income and cash flow; this situation necessitates operating and/or capital reserves to ensure the continued viability of the project.

Development Fee. Due to the nature of affordable housing projects, where development fees are typically charged and included in project costs, the pattern of the project pairs is expected. Ten out of the 14 affordable projects had higher per person development fees than their market rate comparisons, while only two affordable projects had lower per person fees.

Land. This cost component needs to be considered in light of the common method of subsidizing affordable projects via land leases or land write-downs. Affordable projects' land costs per person ranged from 100 percent less than their market rate counterpart to 169 percent more. Nine out of the 14 affordable projects paid less per person for land, and five paid more. This issue is explored in more detail in the next section, including a comparison of only those pairs in which both members paid market rate prices for land acquisition.

SPECIAL ISSUES

The Development Process

The development process can influence the cost of producing housing in a myriad of ways. Aspects that are unique to each project, such as basic capability and experience of the project sponsor, NIMBY opposition, design review, and transaction structuring can all consume substantial amounts of time, which generally translates into costs in the form of overhead, architectural fees, legal fees, or special studies.

Due to the limitations of the data collected for this Study, key aspects of the development process can be analyzed, but cannot be easily translated into their contribution to cost. The following examines the sample data for differences between projects related to project sponsorship, time spent for pre-development, reported opposition to development, and number of financing sources.

Project Sponsorship

There has been much debate among housing policy makers at all levels of government and within the private sector about the most efficient and cost-effective way to produce affordable housing in terms of project sponsorship (i.e., for-profit or non-profit organizations). This Study does not address this issue, and was not designed to resolve this debate. However, the data collected for this Study were analyzed to identify any patterns between costs and project sponsorship for affordable housing.

To conduct the analysis, only the 14 "paired" projects were reviewed; this enables comparison of direct cost differentials. Table 16 displays the adjusted per unit and adjusted per person cost differences between affordable and market rate projects by affordable sponsorship type.

NCSHA's Reserves, HFA Contribution Adjustment, and Meeting Registration Fee Increase Policies

The Board took the actions described below toward securing NCSHA's financial future as an outcome of the association's last financial planning effort. At that time, the Board recognized that these steps were unlikely to generate sufficient revenue over the long-term to sustain NCSHA's operations and adequate reserves. The Finance Committee and Board have continued to pay close attention since to NCSHA income and expense trends, as reflected in the Committee's detailed annual budget and the secretary/treasurer's financial reports to the Board, which NCSHA shares with all executive directors.

To help put the issues described below into context, especially for new executive directors, NCSHA's FY 2012 (July 1, 2011 – June 30, 2012) Budget is $5.1 million. NCSHA projects an FY 2012 operating deficit (reduction in reserves) of $184,245.

The FY 2012 Budget assumes a decline in revenue of 3.6 percent from the FY 2011 projected actual results and a 3.8 percent increase from the FY 2011 budgeted amount. Of the $3.97 million in revenue NCSHA projects it will earn in FY 2012, 43.5 percent is projected to come from HFA annual contributions; 17.8 percent from affiliate dues; 27.7 percent from net meeting revenue (meeting revenue minus expenses), which includes meeting registration, exhibit, and sponsorship revenue; and 10.7 percent from investment income. A pie chart showing the composition of projected FY 2012 revenue is provided at Attachment A, along with a chart showing the percentage of net meeting revenue projected to be generated by each individual meeting.

The FY 2012 Budget assumes an increase in general expenses of 6 percent from the FY 2011 projected actual results and 0.7 percent from the FY 2011 budgeted amount and an increase in meeting expenses of 4 percent. The Board-adopted FY 2012 Budget report is provided at Attachment B.

As of the end of FY 2010, our last audited fiscal year, NCSHA's reserves totaled $13.85 million, 3.06 times its annual operating expenses. We project a further contribution to reserves in FY 2011 of approximately $200,157. NCSHA's reserves are defined as total assets less liabilities and are referred to as "net assets" on its balance sheet.

A chart extending our FY 2012 Budget revenue and expense assumptions two years (FY 2012 – FY 2014) is provided at Attachment C. This projection assumes in FY 2013 and FY 2014 the scheduled 5 percent HFA contribution increase and a 5 percent meeting fee increase, issues which are addressed further on in this memorandum.

We have also included at Attachment C two variations on this three-year projection: one more favorable scenario, which assumes no decrease in meeting revenue in FY 2013 and FY 2014; and one less favorable scenario, which assumes the loss of half of NCSHA's largest affiliates and their associated dues, meeting, and sponsorship revenue.

Table 16: Range of Differences for Projects Sponsored (Compared to Market Rate in Pair)

	For-Profit Affordable	Non-Profit Affordable
# of Cases	6	8
Per Unit Adjusted Totals Range of Difference Per Unit	-30% to +66%	-6% to +51%
# of Cases Below Market Rate in Pair	3	2
Number of Cases Above Market Rate in Pair	3	6
Per Person Adjusted Totals Range of Difference Per Person	-27% to +44%	-42% to +44%
# Of Cases Below Market Rate in Pair	3	6
# of Cases Above Market Rate in Pair	3	2

As indicated, the variation is wide for both types of developers. For-profit developers produced projects that ranged from 30 percent less expensive on a per unit basis than their market rate counterparts to 66 percent more expensive, a range of 96 percentage points. Non-profit organizations produced affordable projects that ranged from 6 percent less expensive to 51 percent more expensive than the market rates in their pairs. On a per person housed basis, the variation is also broad; however, the relative efficiency of producing housing per person by both developer types becomes more evident (due to the measure of per person).

The cases also were analyzed in terms of the number of times each type of affordable developer performed "better" than their market rate counterpart. Of the six for-profit producers of affordable housing, three had lower costs per unit than their market rate counterpart, and three had higher costs per unit. Of the eight non-profit producers of affordable housing, two had lower costs per unit than their counterpart, and six had higher costs. Shifting to the more accurate per person measure, the performance of each type of developer becomes much more similar. Three of the for-profit affordable housing developers had lower costs per person, and three had higher costs. Six of the non-profit producers had lower costs per person than their market rate counterpart, while only two had higher costs per person housed.

offs, meeting cancelations, and other impacts they have experienced of late, we again found no consistent industry reserves standard.

In fact, the Nonprofit Operating Reserves Initiative Workgroup, convened in 2009 in response to the economic crisis and comprised of experts from multiple facets of the nonprofit sector, recently suggested that there is no one-size-fits-all nonprofit reserves standard. It recommended that organizations develop a reserves policy that takes into account their unique revenue and spending risk factors.

The Workgroup suggested that organizations consider in developing their policies revenue volatility factors, including stability of revenue from primary sources, level of dependence on a limited number of revenue sources, the economic health of the community served, and the potential for changes in organizational demand. The Workgroup as well as their spending flexibility factors, including the extent to which economic downturns or other events may affect demand for their services, their ability to downsize quickly and still provide services, long-term leases and other financial commitments, and outstanding liabilities. It recommended that as the risk of revenue and/or spending volatility increases, so should organizations' reserves levels.

HFA Contribution Adjustment Policy

In 2006, the Board adopted an approximate 30 percent increase in HFA annual contributions, phased in over three years, beginning in FY 2008. NCSHA had raised HFA contributions only once in the previous 14 years.

The Board also agreed to reallocate HFA contributions under an asset-based formula that assesses each HFA a percentage of total HFA contributions equal to the percentage its assets represent of total HFA assets, subject to minimum and maximum amounts. NCSHA is to derive asset amounts from a single, objective, third-party source, such a rating agency. A more detailed explanation of the contribution formula and a listing of HFA contribution amounts in effect since FY 2010 are provided at Attachment D.

The Board also decided to increase HFA contribution amounts by 5 percent in FY 2011, the year after the increase was to take full effect, and each year thereafter to keep pace with inflation and to avoid the need for future large increases. The Board has since suspended the scheduled increases in FY 2011 and FY 2012, recognizing the serious financial stress under which many HFAs were operating.

The Board must now consider whether to increase HFA contribution amounts in FY 2013 and beyond. If it decides to impose an increase, the Board also needs to determine whether a 5 percent increase annually is still the appropriate amount.

In 2006, the Board also agreed to reassess every three years the allocation of contribution amounts among HFAs, using the most recently available three-year asset data to determine HFAs' average total assets over the three-year period. It suggested that individual HFA contributions could be adjusted up or

be noted that Fresno shows a short pre-development time of 1.4 months for one affordable project; this occurred because the developer purchased an approved project from another developer. Among the affordable projects, those funded by HUD programs tended to have significantly longer pre-development periods than any other type of housing project. For the five affordable projects with HUD funding, the average pre-development time was reported as 40.8 months. Excluding HUD projects from the affordable project sample results in the average pre-development time declining to 16.4 months.

The geographic difference noted among the affordable group was analyzed further by comparing experience levels of affordable developers across regions. This factor does explain much of the variation; Bay Area region affordable developers represented in the sample were all highly experienced in project development, while the developers of affordable housing projects in Los Angeles and San Diego reported much less extensive track records in general. This suggests that continued effort toward building up the capability of affordable housing developers in Southern California may alleviate this difference.

The notable difference between affordable and market rate may also arise from numerous time-consuming experiences encountered during the pre-development process. These factors can include opposition to development (i.e., NIMBY), design difficulties caused by physical site characteristics, the design review process that is sometimes required by local and/or state agencies, and difficulties in obtaining project financing. Each of these factors is analyzed in more detail below.

Opposition to Development (NIMBYism)

Opposition to multifamily housing projects can occur in both market rate and affordable cases. This phenomenon, often referred to the NIMBY ("Not in My Back Yard") syndrome, is often cited by housing advocates and developers of all types of housing a substantial barrier to the production of housing. Some industry experts consider NIMBYism as a primary cause of the high cost of housing production in California.

Typically, NIMBYism takes the form of either active opposition to new housing projects by existing residents and/or elected officials; or institutional restrictions embodied in a local jurisdiction's growth control, permit process, zoning, design review, or building codes and regulations. These events can all have cost implications; if a project sponsor has purchased or optioned land or has a pre-development loan accruing interest, there can be a direct holding cost incurred as the pre-development process slows down or halts. In some cases, the eventual resolution of the conflict can result in reduced development densities or expensive exactions to mitigate perceived negative impacts to the surrounding area. Indirectly, opposition to a project can add to architectural fees (from repeated redesign) and developer overhead (from more time spent on the entitlement process). In some cases, litigation costs can also be incurred.

The Task Force associated with this Study has discussed this issue, and has raised certain more subtle cost impacts attributable to approvals opposition. These impacts can be characterized as those measures taken by affordable housing developers to "bullet-proof" their projects in anticipation of opposition from residents, elected officials, or local government staff. These

measures include choices about where a project will be located, meetings with community residents to discuss the project in advance of or during the approvals process, and decisions to increase the quality of the project's design and finish so that opposition on design grounds can be neutralized. These measures reflect what a prudent market rate developer would do to ensure community acceptance; however, affordable housing developers face the added burden of addressing concerns raised about the low-income tenancy of their projects.

Participants in the Study were asked whether or not they experienced a NIMBY problem and to discuss the cost impact of resistance from project neighbors and local agency officials. The results of that query were coded and are summarized below.

Table 18: Incidence of NIMBY Problems
Total Sample

Area	Affordable		Market Rate		
	Yes	No	Yes	No	Total
City of San Francisco	2	2	-	3	7
Southern Alameda County	-	2	-	2	4
Fresno County	-	2	-	2	4
City of Los Angeles	-	5	-	3	8
Riverside County	-	4	-	3	7
San Diego County	-	3	-	2	5
Total	2	18	-	15	35

Only two projects, both of which are affordable developments in San Francisco, experienced NIMBY opposition. In one case, site density was reduced by approximately 24 percent, which reportedly directly affected production costs. In the other case, NIMBY objections resulted in a longer entitlement period due to an appeal of the project's conditional use permit, but had no reported impact on project costs according to the project's developer. A transcript of each respondent's answers to the question regarding neighborhood opposition is included in this report as Appendix E.

The lack of reported explicit NIMBY problems does not necessarily diminish the importance of NIMBYism as a barrier to any kind of housing development. Since the sample consists of built projects, there is a natural bias in favor of projects that did not encounter NIMBY problems. This bias could be corrected by evaluating all multifamily project applications and measuring their time and cost in attempting to secure local approvals. Such a methodology is beyond the scope of this study, however.

Furthermore, institutionalized NIMBYism in codes and regulations can have an indirect impact on housing costs. While this institutional aspect is not measured directly by this Study, one of these aspects, design review, is discussed below.

Design Issues

Pre-development periods can be lengthened when a project developer encounters significant design problems arising either from physical site characteristics (e.g., toxics, soil type and load-bearing capacity, landfill, shape, topography, or wetlands), or from a design review process which imposed conditions related to interior and exterior finish, site planning, landscaping, and building design. Table 19 indicates the experience of the sample projects with this problem.

Table 19: Incidence of Design-Related Issues
Total Sample

Design Issue	Affordable	Market Rate	Total
Only Physical Site	4	2	6
Only Design Review	2	4	6
Both Site & Design Review	2	2	4
Total	8	8	16

Sixteen out of the sample of 35 projects had significant design problems of one type or another. Affordable projects tended to have more design issues related to physical site characteristics (six out of eight cases) while market rate projects reported a greater incidence of local design review problems (six out of seven cases). Types of site problems included toxics, the need for pilings due to unstable soil, steep slopes, out-parcels, lack of infrastructure, and an in-fill project requiring reinforcement of adjacent buildings. Design review problems cited by developers included meeting such requirements as extra entryways to enhance pedestrian access, varying the height of structures, adding bay windows, and providing more extensive landscaping than otherwise planned.

Table 20 shows the geographic distribution of projects with significant design issues arising from physical design constraints or the local design review process. Fresno projects appear to not have had any significant design issues. Otherwise, design problems were relatively evenly distributed among regions. The lack of design problems in Fresno might reflect the fact that there is abundant land in the Fresno area and a less stringent local design review process. In more urbanized parts of Riverside, San Diego, Los Angeles, and the Bay Area, design problems are more prevalent due to lack of sites and intensive design review processes.

Table 20: Incidence of Design Related Issues By Geographic Region
Total Sample

Region	Only Physical Site	Only Design Review	Both	Total
City of San Francisco	1	1	2	4
Southern Alameda County	1	1	-	2
Fresno County	-	-	-	-
City of Los Angeles	1	-	2	3
Riverside County	2	2	-	4
San Diego County	1	2	-	3
Total	6	6	4	16

Number of Financing Sources

Housing developers must raise substantial equity and debt to construct their projects. Debt usually takes the form of pre-development, construction and permanent loans, while equity is raised either from the project sponsor's own funds or through a syndication. The financing process begins in pre-development and ends with the obtainment of permanent financing.

One of the striking differences between market rate and affordable projects in the sample is their respective financial structure. Affordable projects tend to have a greater number of debt sources than market rate projects and slightly more sources of equity, as tabulated below.

Table 21: Sources of Debt and Equity Financing
Total Sample Reporting

Project Type	Average No. Debt Sources	Average No. Equity Sources
Affordable	3.1	2.0
Market Rate	1.9	1.5
All Projects	2.6	1.8
Affordable Excluding HUD Projects	3.7	2.1

The data presented above show affordable projects with an average of 2.0 sources of equity and 3.1 debt sources in contrast to market rate projects which have 1.5 sources of equity and 1.9 loan sources. When those projects with HUD 202 sources of financing are excluded from the analysis, the difference between market rate and affordable projects becomes even more apparent; affordable projects averaged 3.7 debt sources and 2.1 equity sources excluding the five projects with HUD financing.

The presence of multiple sources of financing can add time to the pre-development period, leading to increased costs for the project. The old adage that "time is money" is true for most development projects; delays in pre-development can translate into greater staff effort (part of developer overhead), increased pre-development loan interest, increased land carrying costs, expenses for property taxes and security on the site, and higher legal fees.

Multiple financing sources can result in long pre-development periods for several reasons. Since State and local financial sources are not coordinated and operate on different application cycles, approval may be obtained for some sources, while other sources may take much longer. This creates an especially difficult atmosphere of uncertainty, which, in turn, affects the willingness of both private lenders and equity investors to commit funds to the project. Moreover, most public sources of financing require site control, causing affordable developers to pay for lengthy option periods or constraining their ability to negotiate effectively for land purchase while waiting for funding commitments.

The lack of standardization for loan application, underwriting requirements, and loan documents among multiple financing sources can also lengthen pre-development time and impact costs. Often, an affordable housing developer must prepare a different application as well as provide different (but often overlapping) documentation. Then, more time is added as each lender separately underwrites a project at its own pace. Since each lender has its own form of loan documents, the loan negotiating process becomes cumbersome. For syndicated projects, a separate review process is completed by the project's investor(s). This review can be very onerous and stringent, due to concern about the perceived riskiness of the investment.

The third impact of multiple financing sources is reflected in the time that the developer must spend in coordinating among the various lenders' and investors' often competing requirements. The financing sources often have conflicting requirements about security, loan to value ratios, payment schedules, toxic requirements and other issues related to controlling risk. Working out those issues adds time to a project's pre-development schedule, contributing to potentially higher project costs.

Construction Costs

The analysis of the project pairs suggested that there are several key factors affecting construction costs, including prevailing wage requirements, parking solutions driven by density maximization, and the fact that many affordable projects have more bedrooms per unit than their market rate counterparts.

Prevailing Wage Requirements

Many affordable housing projects in California are subject to prevailing wage requirements associated with local, state, or federal funding. If an affordable housing project uses more than a nominal amount (over $2,000) of federal funds for construction, alteration, and/or repair, the project is subject to the Davis-Bacon Act. The Davis-Bacon Act, originally enacted in the Depression year 1931 for the purpose of protecting local wage rates on federal construction

projects, requires that contractors pay prevailing wages established by the Department of Labor. State prevailing wage requirements for affordable housing projects apply for projects that use HCD Rental Housing Construction Program funds for construction. Local prevailing wage requirements have also been enacted by a number of California localities, including Los Angeles and San Francisco.

Prevailing wage rates are not necessarily the same as union wage rates in an area. The difference is due to the way in which prevailing wage rates are set by the Department of Labor. The prevailing wage rate is defined as the wage paid to the majority of the laborers or mechanics in the classification on similar projects in the area during the period in question. It also should be noted that multifamily housing is often classified as "commercial" construction and subject to commercial prevailing wage rates, which are significantly higher than rates for projects classified as residential.

Prevailing Wages in Study Sample. For the 35 projects in the sample for this Study, 20 paid union or prevailing wages. Of those 20, five were market rate and 15 were affordable projects. Of those 15 affordable projects, five were subject to state or local prevailing wage requirements and ten were subject to Davis-Bacon Act standards.

In the fourteen project pairs, the payment of or non-payment of prevailing wages was examined to determine whether it had a cost impact on construction costs. For five of the pairs, the affordable project paid prevailing wages, but the market rate did not. In four of these five cases, the affordable project had construction costs ranging from 12 to 42 percent higher than the market rate comparable. These four affordable projects were all located in Southern California.

Although prevailing wages cannot account for the entire construction cost differential, it is likely that payment of prevailing wages is at least a partial explanation of the cost differences. To further explore this issue, information was gathered for this Study regarding the impact of payment of prevailing wages on residential construction costs.

Two methods were used to assess this issue: a telephone survey of contractors to obtain their opinions as to the typical impact of prevailing wages on cost, and a series of cost estimating exercises to evaluate likely increases in construction cost for actual projects in Los Angeles and the Bay Area region.

Contractor Opinions. A phone survey of 13 contractors in the Bay Area and Los Angeles was conducted by LISC as part of this Study. The survey asked the contractors what they thought the payment of prevailing wages generally added to a project's construction costs, based on their experience. Ten of the thirteen contractors responded to the survey (six from the Bay Area and four from the Los Angeles area).

The respondents felt that prevailing wage requirements can add from five to forty percent to the cost of a project, depending on the area.

Project size has a strong impact on whether a project developer can pay non-union wages and obtain a good quality project. According to contractors contacted during the survey, larger or

more complicated projects (above 75 to 100 units) require tradespeople with more sophisticated skills and experience, which typically means union members or payment of union wages. In addition, the perception is that "you get what you pay for" (i.e. union work is of a higher quality with fewer change orders) because of the skill level required to be a member of a union.

Actual Project Cost Estimates. Comparisons of the cost impact of prevailing wage and non-union wages on two specific affordable housing projects, one in Los Angeles and one in San Mateo County, were also conducted for this Study. The Los Angeles comparison was performed by a cost estimating firm in Los Angeles, Gary W. Zinn & Associates in October 1992. Zinn & Associates estimated the construction costs for an actual 22 unit affordable housing project recently built in Los Angeles based on both prevailing wage and non-union labor rates. The analysis (presented in part in Appendix G) found that construction costs for the project could be as much as 32 percent more if prevailing wages were paid, as compared to non-union wages.

The San Mateo County comparison was based on bids provided by four contractors for an affordable project recently put out for competitive bid (October 1992). The bids prepared on an assumption that prevailing wage requirements would apply ranged from 5 to 16 percent higher than the bids prepared on an assumption of non-union rates.

These two methods suggest that the cost impact of prevailing wage requirements varies by region as well as by the individual contractor's approach to estimating costs. In the Bay Area, which has a strong union presence and a large number of union contractors, the prevailing wage "premium" ranges from 5 to 15 percent; in the Los Angeles area, which has less of a union tradition, the premium varies from 15 to 30 percent.

Parking and Density

Parking requirements can influence projects cost in several ways. First, housing developers must balance the goal of maximizing marketable project densities with local parking requirements, which are often determined by the number and type of units planned. A developer of a project containing nothing but studio units will most often have fewer required spaces per unit than a developer planning a project consisting of only two bedroom units. When larger units (e.g., more bedrooms) stimulate higher parking requirements, project densities decrease and land costs per unit tend to be higher. The type of parking provided also impacts costs. Excluding land costs, structured garage parking is more expensive to provide than open lot spaces. Carports are less expensive than enclosed garages. Appendix F presents a summary of the residential multifamily parking requirements in place for each project in the sample. As indicated, the number of parking spaces required increases with the number of bedrooms. Some jurisdictions also specify the type of parking. Since affordable projects have already been shown to have a larger number of bedrooms on average than market rate projects, they will tend to have to provide more parking in the absence of any waiver by the permitting agency.

Table 22 shows how the projects in the sample complied with local parking requirements. "Code+" means that the developer provided more parking than required, "Code" indicates only required parking was provided, "Code-" denotes less parking provided than required (assumes a partial waiver) and "None" indicates no parking was provided (full waiver).

Table 22: Parking Provided Relative to Code Requirements
Total Sample

Parking Provided	Affordable	Market Rate	Total
Code +	-	4	4
Code	17	9	26
Code -	2	-	2
None	1	-	1
Total	20	13	33

Note: Data not available for two projects

Most projects meet parking code requirements and there is no significant difference between the experience of affordable and market rate projects. There were four market rates, two in Fresno and one each in Los Angeles and San Francisco, which exceeded code requirements due to marketing considerations. Three affordable projects obtained waivers which reduced parking and one received a full waiver.

The Impact of Unit Density on Parking Type and Cost. The sample projects for this Study were analyzed in terms of the relationship between their density (e.g., dwelling units per gross acre) and the type(s) of parking provided. Table 23 below presents the data for these two variables.

Table 23: Unit Density and Parking Type

	Density (Units/Acre)	Parking Type
Bay Area Region		
San Francisco		
SFMR1	110	Semi-sub podium garage
SFMR2	75	On-grade podium garage
SFMR3	45	On-grade garage
SFAFF1	80	Garage and open surface
SFAFF2	90	Underground garage
SFAFF3	90	Semi-sub garage (not for tenants)
SFAFF4	75	On-grade garage
Southern Alameda County		
SALAMR1	20	Carport and open surface
SALAMR2	35	On-grade garage
SALAAF1	25	Carport and open surface
SALAAFF2	55	Open surface (partial waiver)
Fresno Region		
FRESMR1	15	Carport, open surface, individual garage
FRESMR2	20	Carport, individual garage, open, & covered surface
FRESAFF1	15	Open surface
FRESAFF2	10	Individual garage and open surface
Los Angeles Region		
Los Angeles City		
LAMR1	115	Underground garage
LAMR2	55	Semi-sub podium garage
LAMR4	110	2 level underground/semi-sub garage
LAAFF1	30	Open surface
LAAFF2	60	Underground garage
LAAFF3	60	Semi-sub garage
LAAFF4	115	Underground garage
LAAFF5	45	On-grade garage
Riverside County		
RIVMR1	20	Covered and open surface
RIVMR2	NA	Covered and open surface
RIVMR3	15	Covered and open surface, garage
RIVAFF1	25	Open surface
RIVAFF2	15	Covered and open surface
RIVAFF3	20	Covered and open surface, garage
RIVAFF4	10	Covered and open surface
San Diego Region		
SDMR1	45	Semi-sub garage + indiv garages
SDMR2	15	Indiv garages
SDAFF1	15	Open surface
SDAFF2	30	Open surface
SDAFF3	10	Open surface

Note: Density rounded to the nearest multiple of five to protect confidentiality.

As expected, the more dense projects, particularly in urban areas such as San Francisco and Los Angeles, needed to provide parking in ways that tend to be expensive, adding to the cost of those multifamily units. However, it is important to note that the provision of parking in at-grade parking structures, semi-sub podium garages, or completely underground garages, is a solution that is necessary when building at densities above 24 to 30 units per acre. This physical constraint applies to any kind of housing project, whether it is designed for low/moderate income households or the open market. The only real difference between the two kinds of projects built at the same density with the same parking solution is that, in some cases, market rate projects can actually charge rent for parking spaces in garages, resulting in some recovery of the costs to construct garages.

Construction costs can be dramatically impacted by the type of parking provided in a project. For example, while surface parking in an open lot can be constructed for as little as $1,500 per space, an at-grade parking structure generally costs $10,000 to $12,000 per space, and an underground garage typically costs as much as $15,000 per space or more. Thus, a project with 100 units can add as much as $1.35 million (or $13,500 per unit) to its cost when it moves from open surface parking to an underground garage.

Parking solutions must be understood in terms of their economic trade-offs, however. If land is expensive, there will be a tendency to maximize built density, leading to the inclusion of an expensive parking garage. If the garage were not provided, density would be much lower, due to the inability to provide adequate parking in a surface lot.

Units with Three or More Bedrooms

In general, affordable housing developers plan projects in response to public funding programs that specify the type of housing eligible for funding. Funding programs are designed to meet the demand for affordable housing generated by seniors, disabled, and low income families. In many cases, the funding source criteria determine the target market, which, in turn, results in construction of either relatively small units for elderly or relatively large units (in terms of number of bedrooms) for families. In contrast, market rate developers design their projects in response to local market conditions and area demographics for households able to pay market rate rents. This allows more flexibility in configuring the bedroom mix.

This section explores the cost implications of the nature of affordable family housing, which tends to have a greater concentration of units with three or more bedrooms in a typical project than similar market rate projects. Almost 30 percent of all the units contained in the affordable projects analyzed in this Study had three or more bedrooms, and 14 of the 20 affordable projects had a concentration of these units exceeding 20 percent of their total number of units.

Pair Cost Differences By Predominance of Three of More Bedrooms in Units. An analysis of the project pairs by concentration of three or more bedroom units and construction cost differences is presented below.

Table 24: Comparison of Bedroom Mix for Project Pairs

Pair	0-2 BRs	3 or more BRs	Average Unit Size	Construction Cost Difference Aff vs. Mkt Rate Per Unit
SFMR1	100%	-	902	-
SFAFF4	75%	25%	837	32%
SFMR2	100%	-	1,105	-
SFAFF2	15%	85%	932	4%
SFMR3	100%	-	1,073	-
SFAFF1	50%	50%	881	4%
SALAMR1	100%	-	878	-
SALAAFF1	60%	40%	976	-4%
FRESMR1	80%	20%	824	-
FRESAFF1	60%	40%	874	11%
FRESMR2	80%	20%	984	-
FRESAFF2	50%	50%	782	-11%
LAMR1	100%	-	789	-
LAAFF5	60%	40%	1,031	35%
LAMR2	100%	-	704	-
LAAFF3	30%	70%	796	39%
LAMR4	100%	-	782	-
LAAFF4	100%	-	690	-18%
RIVMR1	50%	50%	928	-
RIVAFF2	40%	60%	915	30%
RIVMR2	100%	-	774	-
RIVAFF1	100%	-	550	-4%
RIVMR3	100%	-	625	-
RIVAFF3	60%	40%	946	42%
SDMR1	100%	-	847	-
SDAFF3	100%	-	1,138	12%
SDMR2	100%	-	1,050	-
SDAFF2	-	100%	1,056	23%

The data show a pattern of higher per unit construction costs for the affordable projects in those pairs where there is a greater concentration of three or more bedroom units than for the market rate comparisons. Construction costs were selected for this analysis because they are the most likely to be impacted directly by the increased number of bedrooms within a unit. In ten of the 14 pairs, the affordable project had higher per unit construction costs than its market rate counterpart. In nine of those cases, the affordable project also had a higher proportion of three and four bedroom units. For four of these pairs, although the average unit size in terms of square feet is the same or smaller for the affordable project (SFAFF4, SFAFF2, SFAFF1, SDAFF2), the preponderance of three or more bedroom units in the affordable project appears related to higher per unit construction costs.

A separate analysis of per unit total (adjusted) costs related to three or more bedroom concentrations mirrored the pattern described above. In nine of the 14 pairs, the affordable project had higher total (adjusted) costs; in eight of these nine affordable projects, the unit mix also had a higher proportion of three and four bedroom units than their counterpart. It is likely that part of this pattern is also due to the differences in bedroom mix as they impact construction costs, fees based on a percent of construction costs, and even local government fees based on number of bedrooms. Other factors such as fixed soft costs and site improvement costs are also affecting the findings about total (adjusted) cost differences between many of the projects (see Appendix D); these factors are explored elsewhere in this Study.

Analysis of Plans for Project Pairs. For seven of the above pairs, a more detailed review of site plans and floor plans was conducted as part of this Study. This review suggested that cost differences for affordable projects with more bedrooms in their units can be attributed, in part, to the following factors.

Increased Number of Interior Walls. Projects with a higher proportion of units with three or more bedrooms tend to have more interior walls and trim, because they are adding bedrooms, closets, larger kitchens, separate dining rooms and other functional space. Even when the affordable three bedroom units have a size (in square feet) similar to the market rate two bedroom units, the more efficient three bedroom units add more lineal feet of wall and trim per unit, which adds more materials and labor costs to the project. Further, the extra walls add more weight to the building and may create some increases in structural members, foundations, etc, which can also increase construction costs.

In contrast, for the larger (in square feet) market rate two bedroom units that roughly match the size of the affordable three bedroom units, more volume is provided to the fewer number of rooms, typically 100-200 square feet, resulting in more generous room dimensions. This kind of space is less expensive than if it were contained in bedrooms because the lineal feet of wall (and therefore trim and structural materials) is less. The more generous room dimensions but fewer number of rooms in these cases also does not typically impact the structure (foundation and roof).

Increased Square Footage of Units. In some of the affordable cases, the unit design for the three and four bedroom units is 300 or more square feet larger than the unit design for the two bedroom unit in the same project. This is a clear recognition of the fact that a change in unit size signifies a

change in users. These larger units with more bedrooms are designed for families and include larger kitchens, separate dining rooms, sometimes more bathrooms, and additional storage, all of which can make the costs for the three bedroom units more than similar affordable two bedroom units.

More Complex Unit Design. Several of the affordable projects with a predominance of three or more bedroom units exhibited more complex unit designs than their market rate counterparts.

In order to accommodate units with more bedrooms, project designs have to allow for units with more than one or two exterior walls (in order to permit enough windows to serve each bedroom). For some of the affordable projects, this complexity increases as a decision is made to build townhouse units rather than stacked flats. The need for more building articulation and more difficult site planning faced in townhouse projects was evidenced by several of the affordable projects in the sample.

Increased Structure for Townhouses. Some of the sample projects with a higher proportion of 3 or more bedroom units are designed as townhouses (to accommodate families) rather than stacked flats. These projects have more numerous but smaller buildings with a greater proportion of exterior wall, trim, and finish material. Further, since the townhouses are designed as two story units, there are individual staircases in each unit (rather than two common stairs for an apartment building with 6-8 flats), adding to construction costs per unit.

Indirect Costs From Adding Bedrooms. Adding a third or fourth bedroom to a unit impacts cost in two ways. First, there are the direct costs associated with the construction of the additional bedroom, as outlined above. Second, there are a number of indirect effects from changes in unit and project design that can cumulatively have a significant impact on project costs. These indirect factors, while not quantifiable from the limited Study data, are discussed below in general terms.

Design Intention. Most market rate projects, intended for singles or couples rather than families with children, are not designed with units containing three or more bedrooms. Instead, the largest market rate units typically are more luxurious two master bedroom/two bath units designed with generous bedroom and living room areas, but with kitchens that are the same size as the regular one and two bedroom units. In contrast, affordable projects, designed for families with children, often have three bedroom units that are 300 square feet larger than their two bedroom units. This is not a result of simply bigger unit volume, but of a change in plan to include a larger kitchen, separate dining room, additional closets and storage areas as well as the additional bedroom.

Unit Layout and Location. In both market rate and affordable large-scale housing projects (i.e., over 50 units) with a mix of unit sizes, the architect typically locates the units with more bedrooms in the corners or on the ends of buildings, because these units fill the additional space created when a corridor turns a corner or ends in a fire escape/stair tower. The corner or end location also provides two exposures for windows, ideal for three bedroom units needing more exterior wall for bedroom windows. As such, the unit with three bedrooms is likely to have a larger living room, dining room, and kitchen because the layout of the building (i.e., the floor plan

necessary to enable turning a corner and having unit doors accessible to a corridor) allows the architect to be more generous with these units.

The logic of placing three bedroom units in corner/end locations fits with the recognized need for more space in the common rooms of a three bedroom unit than in a smaller one. Thus, three bedroom units typically have larger rooms across the board, not just additional bedrooms tacked on to a small unit plan. In affordable projects, where the majority of units can be sized for families, it is not possible to simply locate the three bedroom units at the corners of the building. Rather, the population served often requires the designer to consider a garden apartment or townhouse layout on suburban sites, or a more articulated building on an urban site to accommodate the need for multiple bedroom windows.

Kitchens and Baths. The functional and expensive rooms of any housing unit are designed for the imagined user. A studio or one bedroom apartment for an elderly person or a young single adult often has an 8 foot by 8 foot pullman kitchen (refrigerator and sink on one side, stove and counter space on the other with a 3 foot, 6 inch walkway in between). This kitchen design would not be acceptable in a larger three or four bedroom apartment. The kitchen would need more storage and work space, room for a table, and/or a separate dining area. Thus, as three bedroom units are designed for affordable projects, it is common to find this larger kitchen layout. This change in layout is not as common in market rate projects, typically containing a mix of one and two bedroom units.

Bathrooms are a different case. Although one bathroom may work in a two bedroom unit, most market rate projects typically design most (if not all) of their two bedroom units with two baths for flexibility and market appeal. Affordable projects vary. Some economize with 1.5 bathrooms in two and three bedroom units while others automatically incorporate two bathrooms in two or more bedroom units. This choice is part of an overall design strategy based on the targeted users and balanced against the added cost. Because additional bathrooms add a substantial cost to each unit, affordable housing developers face a dilemma in trading off the cost against the need. In six of the 14 pairs in this Study, the affordable projects have more bathrooms per bedroom than their market rate counterparts, which probably contributes, in part, to higher per unit costs.

Parking. Often, parking requirements are based on the number of bedrooms per unit, so affordable projects with a concentration of three or more bedroom units would have to provide more parking than the same number of units with fewer bedrooms per unit in a market rate project. This implies that family projects must acquire larger sites to accommodate the parking. As discussed elsewhere in the Special Issues section, parking is always a costly item. In suburban projects, parking costs include additional site area, paving and or construction, landscaping, lighting and other amenities. In urban projects, meeting parking requirements may require structured parking, which contributes significantly to construction cost.

Material Specifications. The choice of a family versus an adult-oriented project will affect decisions about products and materials. Appliances, hardware, fixtures, and numerous other items will be selected for durability in projects with three or more bedroom units because of the obvious wear and tear. While this is not a major item affecting overall project costs, taken together with other factors, it can contribute to higher construction cost.

In summary, the nature of family-oriented affordable housing, which is constructed to meet the needs of low income households, may create higher per unit costs even when the square feet of the units are similar to market rate units with fewer bedrooms. This finding must be considered in any strategy to reduce affordable housing costs; there are tradeoffs between economics and public policy for these types of projects.

Syndication Costs

Some industry experts have expressed concern that the costs to syndicate affordable projects in order to raise equity from LIHTCs can lead to increased housing production costs. The survey used for this Study gathered data for syndication costs, including legal fees, syndication consultants, and the California Tax Credit Allocation Committee (TCAC) application fee. It should be noted that the amount of TCAC application fees collected are net of refunds made by TCAC to project applicants upon completion of projects.

The following presents the total of net TCAC fees as well as consultant and legal fees related to syndication for the affordable projects in the sample by their regional location.

Table 25: Syndication Costs as Percent of Total (Adjusted) Costs

City of San Francisco	0.6% to 5.2%
Southern Alameda County	1.0% *
Fresno County	0.4% *
City of Los Angeles	0.5% to 2.4%
Riverside County	0.7% to 5.4%
San Diego County	Not syndicated

* = One project in sample

As indicated, the total costs incurred for syndication vary substantially within regions. These costs can add from less than one percent to five percent or more to development costs. For projects which face difficulties achieving financial feasibility, this can be a significant cost factor. Since most of the costs associated with syndication (i.e., legal fees, consulting fees) are charged on a fixed basis, syndication costs can become particularly burdensome for smaller projects. For most affordable projects, the process of raising equity through LIHTC syndication is complex and time-consuming; however, with the decline in federal funding for affordable housing, this vehicle has become one of the only ways to finance housing for low income households.

Soft Costs

Two kinds of soft costs that appeared to significantly impact cost differences in the some of the project pairs analyzed for this Study are local government fees/permits and architectural/engineering fees.

Local Government Fees and Permit Costs

In post-Proposition 13 California, local governments, municipal utility districts, and school districts have come to rely greatly upon revenues generated from fees and permits to pay for public infrastructure and indirectly contribute to general fund revenues. Fees/permit costs are often quoted by multifamily developers as a significant housing cost driver. The Study survey asked participating developers to report all local fees and permit charges paid as part of their project costs; the results are presented below in Table 26.

Table 26: Average Local Agency Fee and Permit Costs
Total Sample

	Market Rate	Affordable	Percent Difference
Average Per Unit	$3,606	$3,569	-1.0%
Average Per Person Housed	$1,477	$1,321	-10.6%
Average % of Total Adjusted Costs	4.8%	5.4%	12.5%

As the data indicate, affordable and market rate projects paid nearly the same local fees/permits on a per unit basis. This result is expected since most local agencies levy fees and permit charges on a per unit basis. On a per person housed basis, which accounts for differences in unit mix, affordable projects report lower costs by just under 11 percent.

Fees/permit charges were also evaluated as a percent of total costs. As shown, local agency fees/permits can be a significant component of costs; for the sample, fees/permits ranged from 4.8 to 5.4 percent of total (adjusted) costs. Thus, local fees/permits can negatively impact the costs of building housing for all types of housing. Since many affordable housing projects have tight margins between project feasibility and infeasibility, fees/permits can often render a project infeasible. It should be recognized that there is a policy tradeoff inherent in this issue, however. Local governments face almost insurmountable problems financing their infrastructure and services, and the development of affordable projects still result in residents who require infrastructure and services.

Special Exactions. Survey participants were also asked to indicate whether they paid any special exactions (typically defined as payments required as a condition of approval for a particular project in addition to the fees/permits that apply to all projects in a jurisdiction). Only three market rate projects reported paying such exactions. Two of these projects were located in Redevelopment Agency Project Areas and the payments were made directly to the Redevelopment Agency.

Architectural and Engineering Costs

The cost data collected for the Study sample included line items for architectural services and engineering, commonly referred to as A & E. The relationship between A & E and total adjusted cost for both affordable and market rate projects was analyzed in order to ascertain if the two kinds of projects experience different patterns of expenditures. Table 27 below presents the ranges and averages for A & E costs as a percent of adjusted total project cost.

Table 27: A & E Costs as Percent of Total Adjusted Costs

	Market Rate	Affordable
San Francisco	5.0 - 8.7%	4.6 - 6.2%
S. Alameda County	1.9 - 2.1%	3.0 - 4.2%
Fresno	0.9 - 1.8%	1.4 - 5.0%
Los Angeles	2.1 - 2.8%	3.0 - 7.3%
Riverside	2.6 - 4.1%	1.9 - 4.3%
San Diego	1.6 - 3.2%	3.3 - 6.8%
Average	3.6%	4.5%

As indicated, although the range of A & E cost percentages overlaps considerably between market rate and affordable projects, the market rate projects tend to have a lower percentage. On average, the 15 market rate projects paid 3.6 percent of total adjusted costs for A & E services compared to an average of 4.5 percent for 20 affordable projects.

As noted in the detailed pair analyses in Appendix D, some affordable projects had exceptionally high A & E costs compared to their pair. Extensive design review for the affordable projects with relatively high A & E costs was not always an explanatory factor.

In summary, architectural and engineering services generally appear to be more effectively contained by market rate project sponsors. This finding suggests that the affordable housing industry could concentrate on holding down A & E by using experienced, cost-effective professional services, develop a pattern of using the same professionals repeatedly (mentioned by several market rate developers as a way they minimized costs), and perhaps even consider pooling information in order to contract for professional services from known cost-effective architecture and engineering firms. Market rate developers also use standard site and unit designs that can be replicated inexpensively across projects. Affordable projects, in contrast, tend to not have the volume of production that permits such economies of scale. Thus, sharing design prototypes might also assist in containing A & E costs for affordable projects.

Reserves

In many cases, multifamily housing developers are required by their financing source to establish reserve funds to cover operating deficits, interest payments, capital improvements, or distributions

to equity partners that cannot be met initially by operating cash flow. These reserve funds, reported as part of total project costs, are summarized in Table 20.

Table 28: Reserves

	Market Rate	Affordable	Total
No. of Projects Reporting Reserves	2	11	13
No. of Projects Reporting No Reserves	13	9	22
Total	15	20	35
Average per Unit (For Reporting Projects)	NA	$1,181	

Just over half the affordable projects reported reserve requirements, with an average cost of $1,181 per unit. All 11 projects that reported reserves were funded by Low Income Housing Tax Credit syndications, which sometimes require reserves to ensure stable cash flows. In contrast, only two market rate projects reported reserves; both of these projects were bond financed and had cash flow characteristics that required substantial reserve funds. Dollar amounts for market rate projects' reserve costs are not shown in Table 20 because of the limited incidence and the wide variability of actual dollar amounts.

While reserve funds do not appear to be a major cost driver for the affordable projects in the sample, their higher incidence compared to market rate projects suggests that reserves do represent a cost burden incurred by affordable projects more frequently than by market rate projects.

Development Fees

For many developers, development fees are one source of financial return for undertaking a project. Development fees are usually calculated as a percent of project costs and provide direct, upfront compensation to the developer. Other possible sources of financial return to a developer include cash flow, contractor's profit (if the developer serves as his/her own contractor), management/leasing fees, and property appreciation realized upon sale. These forms of return are typically received over time or deferred until project disposition, and are highly sensitive to changes in external economic conditions as well as project management.

One of the aspects that sets affordable projects apart from market rate projects is the way financial return is received. For affordable housing developers, the primary source of compensation for undertaking the project is the development fee, which is considered part of project costs. Developers of affordable housing generally receive very little cash flow or property appreciation over the long term, due to regulatory restrictions on rents, tenancy, and resale. However, some developers of affordable housing, like their market rate counterparts, are also compensated by charging contractor and/or management fees.

For market rate developers, development fees play a lesser or non-existent role; return typically comes from one or more of the other sources mentioned above.

For this Study, fifteen of the 20 affordable projects in the sample reported a development fee, compared with only seven of the 15 market rate projects. Moreover, the amount of development fee for market rate projects was generally very small, reflecting the different structure of overall financial return for market rate developers.

Affordable Projects' Development Fees. The incidence and amount of development fees for affordable projects in this Study's sample is shown below; affordable developers which received no fees or fees under $10,000 for the project as a whole are reported as "NA."

Table 29: Development Fee as Percent of Total Cost
Unadjusted Total Costs
Affordable Projects Only

Project	Developer Type	Fee as Percent of Total Costs
SFAFF1	Non-Profit	10.5%
SFAFF2	Non-Profit	7.7%
SFAFF3	Non-Profit	1.8%
SFAFF4	Non-Profit	13.0
SALAAFF1	Non-Profit	8.3%
SALAAFF2	Non-Profit	NA
FRESAFF1	For-Profit	15.2%
FRESAFF2	For-Profit	NA
LAAFF1	For-Profit	7.6%
LAAFF2	For-Profit	0.8%
LAAFF3	Non-Profit	6.6%
LAAFF4	For-Profit	NA
LAAFF5	Non-Profit	5.9%
RIVAFF1	For-Profit	13.5%
RIVAFF2	For-Profit	12.9%
RIVAFF3	For-Profit	10.4%
RIVAFF4	Non-Profit	11.8%
SDAFF1	Non-Profit	NA
SDAFF2	Non-Profit	NA
SDAFF3	Non-Profit	2.4%

For the 15 affordable projects that reported development fees, the fees ranged from less than one percent to 15.2 percent of total unadjusted costs. The five projects that did not report development fees used HUD funds as their major source of financing, limiting the payment of development fees. Fourteen of the projects that reported fees were partially financed by equity derived from the Low Income Housing Tax Credits. In fact, the large number of these kinds of projects in the sample probably accounts for the high incidence of reported development fees,

since the California Tax Credit Allocation Committee program authorizes development fees of up to 15 percent of the eligible basis.

Affordable housing developers use development fees to pay for a variety of obligations including overhead, personnel and administration, pre-development financing, and/or "seed money" for new projects. In addition, for those projects funded through the LIHTC program, the development fee is also sometimes used to meet obligations related to the nature of that funding such as:

- Capitalization of the general partner, if it is not an established organization, which can be up to 10 percent of total investment in the project;
- General partner capital contribution, one percent of total capital in the project;
- Operating deficit guarantee provided by the general partner, which can equal up to nine months of project operating income;
- Tax benefit guarantee provided by the general partner, which can be up to five percent of total capital contributions;
- Construction cost overrun guarantee provided by the general partner, which can be unlimited.

Of course, market rate developers can also face these or similar obligations, which will affect their financial returns as well.

Financial Return for Market Rate Projects. Since market rate developers typically do not receive the bulk of their return from upfront fees, the most equivalent comparison of return for market rate developers to the affordable development fee is the return derived from a project that is built, leased, and then sold at stabilization according to a capitalized income approach. The difference between the costs to build the project and the value received upon sale after stabilization represents a relatively rapid return to the market rate developer.

To assess the financial return of a market rate rental project, a hypothetical pro forma analysis based on an actual project drawn from the market rate sample was conducted (see Table 30).

The analysis indicates that a market rate developer could expect a return (as percent of total cost) of less than one percent to almost 13 percent of costs, depending on assumptions about capitalization rate upon sale. These findings illustrate the sensitivity of financial returns to capitalization rates, which, in turn, fluctuate with overall economic and market conditions. If capitalization rates rise above 9.5 percent for this project, which has happened for numerous projects in California during the last two years, profit would falls below zero and becomes a loss. It should be noted that this analysis does not compute profit in terms of return on equity.

Table 30: Market Rate Project Rate of Return Analysis (a)

Assumptions (b) t Rate Project Rate of Return Analysis Pro Forma

Project Size:	Medium
Total project costs:	$6,000,000
Vacancy rate:	5.0%
Other revenues per unit (annual):	$180
Operating expenses as % of EGR:	30.0%

Net Income Analysis

GROSS REVENUES	
Scheduled Rent	$836,100
Less: Vacancy	($41,805)
Other revenue	$15,840
EFFECTIVE GROSS REVENUES	$810,135
LESS OPERATING EXPENSES	$243,041
NET OPERATING INCOME	$567,095

Profit Analysis

@ Disposition CAP rate	8.50%	9.00%	9.50%
CAPITALIZED VALUE	$6,671,700	$6,301,050	$5,969,416
LESS TOTAL PROJECT COST	$6,000,000	$6,000,000	$6,000,000
PROFIT (Gross margin)	$671,700	$301,050	($30,584)
PROFIT AS % OF TOTAL PROJECT COST	11.2%	5.0%	-0.5%

Notes:

(a) Data taken from actual project in sample set and rounded.
Number of units and unit sizes are not presented in order to maintain confidentiality.

(b) Assumptions regarding vacancies, capitalization rates and operating expenses are not necessarily valid across all California markets but are reasonable for the specific market from which this case was taken.

In summary, while affordable housing developers rely to a much greater extent than market rate developers on direct compensation through development fees, the range of return when expressed as a percent of total cost is similar. Because affordable housing developers consider development fees as a cost of producing housing, it is important to recognize that the structure of developer compensation can have an adverse impact on the reported cost of the housing, at first glance. For this reason, the data in this Study has been adjusted to eliminate development fees from costs to provide a more rational basis for project comparisons.

Land Costs

Land is a key component of total development costs for most residential projects. However, the cost of land is one of the most difficult factors to analyze because land costs are a function of a complex set of variables related to physical characteristics and other circumstances. For example, a site with a low acquisition price might have soil and slope conditions that require expensive grading, cutting and filling, thus raising the effective "cost" of the site vis-à-vis another site not requiring those improvements to make it developable. Other factors, such as zoning and general plan designations, proximity and capacity of utilities, quality of municipal services, overall burden of taxes, fees and exactions, strength of local real estate demand, and the local political and regulatory environment will all affect the cost of land at any given point in time. Moreover, land transactions can often be subject to unique circumstances of the seller and buyer such as need to cash out, imbalance in negotiating skills, and open-ended purchase contracts. Thus, the uniqueness of each development parcel and each land purchase transaction makes it difficult to compare land costs.

Land Costs by Region of California. It is widely acknowledged that California generally has high land costs compared to other regions of the nation. Table 31 indicates how land prices vary significantly by region for projects in the Study sample.

Table 31: Land Costs by Region

	Land Cost Per Unit	
	Affordable	Market Rate
Bay Area Region		
San Francisco	$21,900-$22,300	$27,600-$39,300
Southern Alameda Co.	$15,500*	$9,800*
Fresno Region	$1,800-$3,700	$2,300-$5,200
Los Angeles Region		
Los Angeles City	$17,400-$40,200	$14,900-$38,200
Riverside County	$1,800-$8,800	$3,600-$12,700
San Diego Region	$11,000-$44,700	$11,100-$17,600

Note: * One project reporting market rate land acquisition.

Highly urbanized areas such as the cities of San Francisco, Los Angeles, and San Diego report significantly higher price ranges of land cost than their suburban or rural counterparts in Southern Alameda County, Riverside County, and the Fresno area. The four sample projects in Fresno report land costs ranging from $1,800 to $3,700 for the two affordable projects, and from $2,300 to $5,200 for two market rate projects. This contrasts sharply with the City of San Francisco, where affordable projects paid between $21,900 and $22,300 and market rate projects paid $27,600 to $39,300 per unit for land. The highest prices were reported for San Francisco, Los Angeles, and San Diego, where land costs were close to or exceeded $40,000 per unit. Thus, higher land costs in urbanized coastal areas of California are a significant source of higher total development costs for both affordable and market rate housing.

Affordable versus Market Rate Projects' Land Costs. Many critics of affordable housing state that affordable housing developers often overpay for land, which in turn drives up the cost to provide affordable housing. Table 37 also indicates land cost ranges for both affordable and market rate projects. Generally, land cost ranges for affordable and market rate projects exhibit significant overlap in all regions, indicating no generalized pattern in favor of either affordable or market rate projects.

Six project pairs for which both the market rate and affordable developer reported market rate land costs were analyzed in greater detail as shown below.

Table 32: Land Costs for Selected Project Pairs

	Affordable Projects		Market Rate Projects	
Pair	Price/Unit	Density (DU/acre)	Price/Unit	Density (DU/acre)
FRESMR1 & FRESAFF1	$1,800	15	$5,200	15
FRESMR2 & FRESAFF2	$3,700	20	$2,300	10
LAMR1 & LAAFF5	$23,600	115	$38,200	45
LAMR2 & LAAFF3	$40,200	55	$14,900	60
RIVMR3 & RIVAFF3	$8,800	15	$4,300	20
SDMR1 & SDAFF3	$19,800	45	$17,600	10

No clear pattern of excessive land costs for either type of project in the pairs is evident. In two cases, the market rate project paid significantly more than the affordable project. In three pairs, the affordable project paid substantially more than its market rate comparable, and in one pair the market rate and affordable project paid about the same amount per unit for land. It should be noted that none of the above transactions was adjusted for location, timing, land use designations, availability of utilities, or other factors which could account for differences in land acquisition costs.

TECHNICAL APPENDICES

- APPENDIX A - SURVEY INSTRUMENT
- APPENDIX B - QUALITY RATING METHODOLOGY
- APPENDIX C - PROJECT DESCRIPTIONS
- APPENDIX D - ANALYSIS OF PROJECT PAIRS
- APPENDIX E - SURVEY RESPONSES REGARDING NIMBY ISSUES
- APPENDIX F - MULTIFAMILY RESIDENTIAL PARKING STANDARDS
- APPENDIX G - REPORT ON PREVAILING WAGE COST IMPACTS

APPENDIX A - SURVEY INSTRUMENT

CALIFORNIA HOUSING COST STUDY SURVEY

(All information will be confidential)

1. PROJECT

Project Name:

Project Address: City: Zip:

Developer:

Developer Address: City: Zip:

Contact: Telephone

2. SITE DESCRIPTION

Acres (net):

parcels:

Site shape:

Site topography:

Surrounding uses:

East:

West:

South:

North:

Describe surrounding neighborhood:

How did you acquire your site?

Did you appraise the site or get land comps prior to purchase?

Was the site acquisition an arms length transaction?

3. BACKGROUND

How did your organization get involved in this project?

Describe site in terms of ease or difficulty of development and related design issues:

(toxics, irregular shape, wetlands, flood plain, utilities, etc.)

What renter market segments or target populations are served by this project?

(families, singles, homeless, young professionals, seniors, disabled, military et cet.)

DUs @ 35% median income:
DUs @ 50% median income:
DUs @ 60% median income:
DUs @ 80% median income:
DUs @ market rate:
DUs @ other:

4. PROJECT DESCRIPTION

Housing type:
(townhouse, stacked flats, multifamily rental, condo specs?)

Non-residential component:
(please describe)

Dwelling Units:	Square Feet:
Total units:	Total gross:
# disabled access:	Residential gross:
# special other: (please describe)	Residential rentable:
	Non-residential gross:
	Non-residential rentable:

Structure:

# buildings:	Units per building:
Stories per building:	Framing:
Roofing:	Foundation:
Exterior wall:	Heating system:

Indicate total number of parking spaces and type:
(underground, semi-sub, podium, structure, carport, open lot)

Ventilation system:
(if applicable)

Residential parking ratio:
Non-residential parking ratio:

Describe on what basis parking ratio and mix were selected:

Describe common areas:

Describe special purpose project features:
(include any social service, health or non-housing services)

Page Two

5. FLOOR PLANS

Plan/Program	Bedrooms	Baths	# units	Sq.ft./unit	Rent
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

6 (a). UNIT AMENITIES

Item	Description	Cost/DU:
Refrigerator:		$
Washer/dryer:		$
Range/range hood:		$
Dishwasher:		$
Trash compactor:		$
Microwave:		$
Air conditioning:		$
Fireplace:		$
Carpeting:		$
Cabinetry:		$
Bath fixtures:		$
Ceramic tile:		$

6 (b). PROJECT AMENITIES

Item	Description
Vaulted ceilings/skylights:	(indicate sq.ft.)
Balconies/decks/patios:	
Sprinklers:	
Private yards/fencing:	
Basement:	
Laundry room:	
Elevators (#):	
Security systems:	
Landscaping:	
Pool/ hot tub:	
Gym/health club:	
Tot lot:	
Day care facilities:	
Other (specify):	

7. ENTITLEMENT PROCESS

Please describe the approval process. What stages of the following process did this project go through?

EIR/negative dec.?

LAFCO/annexation?

General Plan amendment?

Zoning change?

Design review?

Subdivision/parcel map?

Conditional use permit?

Development agreement?

Regional water quality board?

Federal EPA?

Air quality management board?

Calif. Dept. Health Services?

Caltrans?

Calif. Dept. Fish & Game?

Army Corps of Engineers?

Other permitting agencies?

Citizen referendum/voter approval?

Designated density: Upon site acquisition: After acquisition:	Time to secure building permits: (from site acquisition)

What was your experience with the neighborhood?

Was final approval different from original zoning or other entitlements?

What local agency requirements/exactions were placed upon the project?
What special design requirements were placed upon the project?

8. DEVELOPMENT COSTS

Land Purchase: (include deposits & option payments not credited to purchase price)	$		
Holding costs:	$		
Subtotal, land & carry:	$		
Site Improvements:			
Demolitions:	$		
Export/fill:	$		
Grading:	$		
Interior streets:	$		
Utilities:	$		
Sewer/water:	$		
Storm water drainage:	$		
Retaining walls:	$		
Toxic remediation:	$		
Other (specify):	$		
Subtotal, site imp.:	$		
Off-site Improvements:			
Utilities:	$		
Storm drainage:	$		
Open space/park dedication:	$		
Other (specify):	$		
Subtotal, off-site:	$		
Construction:			
Residential:	$		
Non-residential:	$		
Accessory structures:	$		
Parking:	$		
Landscaping:	$		
Other (specify):	$		
Other (specify):	$		
Contractor's overhead:	$		
Contractor's profit:	$		
Subtotal, construction:	$		
Construction loan financing:			
Origination costs:	$		
Origination fees:	$		
Total interest:	$		
Misc. other:	$		
Subtotal, construction loan:	$		

Permanent Loan Financing:		
Origination costs:	$	
Origination fees:	$	
Total interest:	$	
Misc. other:	$	
Subtotal, permanent loan:	$	
Syndication Costs:		
Legal:	$	
Bridge loan origination:	$	
Bridge loan interest:	$	
TCAC application fee:	$	
Syndication consultant fee:	$	
Subtotal, syndication costs	$	
Soft Costs:		
Architect/design:	$	
Architect/construction:	$	
Surveying/engineering:	$	
Environmental studies:	$	
Appraisals/market studies:	$	
Legal/real estate:	$	
Accounting:	$	
Performance bonding:	$	
Marketing:	$	
Fixtures/furnishings:	$	
Local permits/fees:	$	
Construction mgt fee:	$	
Developer's overhead:	$	
Development fee:	$	
Development consultant fee:	$	
Subtotal, soft costs:	$	
Capitalized Reserves:		
Operating reserve:	$	
Replacement reserve:	$	
Rent reserve:	$	
Debt reserve:	$	
Subtotal, reserves:	$	
TOTAL COST:	$	
TC PER UNIT:	$	
TC PER SQ.FT.:	$	

9. DATA SOURCE

Do these data represent actual costs incurred?
Source:

10. CONSTRUCTION CONTRACT

Was your construction contract negotiated or competitively bid?

If contract competitively bid:

How many contractors were invited to make bids?

How many bids were received?

How was the contract structured?

(stipulated price, cost-plus, maximum guaranteed price)

What was your original bid for hard construction costs?

(specify whether on and off-site work was specified)

What was the total dollar volume of change work orders?

(indicate whether any significant problems)

11. PROJECT TEAM EXPERIENCE

How many of your projects have involved the same team of professionals?

Architect:	Contractor:
Engineers:	Attorney:
Development consultant:	Other:

12. DEVELOPER FEE

How was the developer fee structured?

What will the developer's fee be used for?

13. PREVAILING WAGES

Was your contractor a union contractor?

Did any of your funding sources require use of a union contractor or payment of prevailing wages?

(local requirement, CDBG, or RHCP)

NOTE: Indicate whether predevelopment, construction or permanent loan.

14. SOURCES OF DEBT FINANCING

Loan #1:	Amount:	Terms: (include special conditions, legal fees paid by borrower, etc.)
Type:		
Source:		
Loan #2		
Type:		
Source:		
Loan #3:		
Type:		
Source:		
Loan #4		
Type:		
Source:		
Loan #5:		
Type:		
Source:		
Loan #6		
Type:		
Source:		
Loan #7:		
Type:		
Source:		
Loan #8		
Type:		
Source:		
Loan #9:		
Type:		
Source:		
Loan #10		
Type:		
Source:		
Loan #11:		
Type:		
Source:		
Loan #12		
Type:		
Source:		

15. SOURCES OF EQUITY FINANCING

Equity #1 Amount: Terms::

Type:

Source:

Equity #2

Type:

Source:

Equity #3

Type:

Source:

What was the developer's contribution to equity?

Did you receive any land writedowns, public subsidies, grants, or other assistance not reflected in cost data supplied above?

16. SPONSOR ORGANIZATION

Please describe ownership structure of the project (partnerships, participation agreements, etc.):

How many partners did you have in this project?

Please describe your organization in terms of type, typical projects and geographic area, years of experience as an organization, number of professionals on staff:

How many projects like this one have you completed?

Was there a project manager? If so, please describe their background and number of years developing housing.

How important a role did your development consultant play, if any?

Please describe any unique aspects of organization that either add to or limit the costs of developing this project:

17. COMMENTS

For this project, are there any actions that could have been taken to reduce costs below what they were?

We are interested in your comments about the costs to produce affordable housing:

APPENDIX B - QUALITY RATING METHODOLOGY

To assess the quality level of a residential project, it is important to look at the overall condition and finish quality. Clearly, specific project features will vary from project to project. An average quality complex may have an extensive security system if the neighborhood is considered unsafe or if the needs of the intended tenants (such as elderly tenants) may want a security feature. The presence or absence of any particular feature does not automatically suggest an above average, average, or below average quality assignment.

Furthermore, it is important to recognize that some finish materials, such as stucco, come in a wide variety of quality levels which depend on thickness, color, application, and general craftsmanship. Similarly, there are many grades of carpet and vinyl flooring, good and bad pressboard cabinets, and a range of quality levels for appliances from even the same manufacturer. The differences in appearance are sometimes subtle and the cost differential on individual items may not seem significant. But $50 to $100 cost differences across a large number of items throughout a project can add up to significant overall cost differences of $5 to $10 per square foot and can affect the durability and maintenance needed over time within each unit.

Overall, most of the 35 apartments projects included in this study fall in the average quality category, with four or five projects that appear to be of modest or slightly lower quality and three or four projects that appear to be somewhat higher than average in terms of quality. This assessment is based upon data and descriptions provided by project sponsors, as well as a review of site plans, floor plans, and, in some cases, photographs. Site visits and inspections of individual units were not part of the review process.

Above Average Quality

The exterior materials for an "above average" apartment would include wood or cedar shake siding, high grade stucco or drivit in more than one color or pattern. Often, there is decorative wood trim and a hip or gable roof which may or may not enclose living space. Roofing materials include long-lasting wood shingles, clay tile, or composition shingle. Windows consist of high quality wood or aluminum, and might include special custom features such as bay or picture windows. Architectural features such as deep roof overhangs, cantilevers, and dormers are also typically found in above average quality complexes, along with private outdoor space in the form of large patios, balconies or decks. Parking can exceed code requirements, and would typically be covered or enclosed, providing security for the tenant. Guest parking would be provided on-site.

Above average quality apartment units also typically have generous room sizes, separate dining areas, extra bathrooms, or high quality interior finishes. The interior finish includes decorative wood trim on base boards, doors, and windows, wood or marble window sills, and high or vaulted ceilings in the main rooms. Kitchens include better than average quality appliances (e.g., large refrigerators with ice makers, stoves with ovens and microwave ovens, dishwashers and

washer/dryer hook-ups) and wood cabinets with tile, butcherblock, Corian, or marble countertops. Bathrooms often feature porcelain fixtures, wood vanities, and ceramic tile floors and walls. Unit floor finishes combine wood, carpeting, and ceramic tile. Above average quality units may also include special features such as fireplaces, wet bars, and tiled entry areas. The building includes elevators, sprinklers, and often a security system.

Average Quality

Exterior materials for an average quality apartment project typically consist of masonite or stucco siding in a single color or pattern with limited trim. Roofs may be trussed or flat and made of composition shingle or built-up tar and gravel. Standard size aluminum windows are common. Small balconies may be provided, but not necessarily for all units, and architectural features such as bays, picture windows, overhangs, dormers or other decorative elements would be limited to the building entry or other special location. Some percentage of the parking may be covered, with the remainder in open parking lots. Additional parking beyond what is required by code would typically not be provided.

Unit interiors often include a combination living/dining room and typical bedroom sizes. Simple on- piece wood or plastic molded trim may be used for windows, doors, and baseboards, but in many cases these may be trimless with dry-wall returns. Kitchens will have average quality refrigerators and stoves, while extra features such as dishwashers, microwaves, or washer-dryer hook-ups are typically not provided. Cabinets will be pressboard with plastic laminate or wood veneer finish and countertops will be plastic laminate. Bathrooms will typically have a fiberglass tub/shower and a one-piece pre-fabricated vanity. Vinyl floors are common; ceramic tile is not. Living rooms and bedrooms will be carpeted to FHA or HUD standards. The building may or may not have elevators, sprinklers, or security systems depending on the unit type (townhouse versus apartments) and the location.

For an average quality complex, project amenities will vary with the market area, but one can expect a management office, laundry room, and community room. Some apartment complexes may have a small pool or exercise room with limited equipment. Landscaping is provided, but consists of a lawn area and modest plantings. Lush landscaping is not representative of this grade of project. Provision of tot lots and play areas will depend on the market and unit type.

Below Average Quality

A simple stucco finish with little to no trim and few if any decorative elements is characteristic of a below average quality complex. The roof may be flat or pitched with built-up or single color composition shingle. Standard single-pane aluminum windows are usually trimless and no private balconies or patios are provided. Parking is to code in open lots.

Unit interiors are built to HUD minimum room sizes. Trim on doors and windows is limited and baseboards are often plastic core molding. Kitchens include very basic stoves and refrigerators but no other special features. Bathrooms include inexpensive fiberglass tub and shower units and prefabricated vanities such as might be expected in a mobile home park. Flooring throughout the

unit is vinyl or inexpensive carpet. The building would not typically have elevators or significant security systems.

The complex may or may not include an office, laundry or community room. Landscaping is minimal. If a children's play area is provided, the landscaping and equipment is basic. Social space for adults and children is not usually provided in a below average quality project.

APPENDIX C - PROJECT DESCRIPTIONS

Appendix: Summary of Project Characteristics

San Francisco Bay Area

Project I.D.	City	Size	Housing Type	Structure Type	Bedroom Mix	Parking Type	Pair
SF-AFF-1	San Francisco	Small	Apartments	Wood frame 4 story	2BR; 60% 3BR; 30% 4BR; 10%	Garage On grade	SF-MR-3
SF-AFF-2	San Francisco	Small	Apartments	Wood frame 4 story	1BR; 5% 2BR; 10% 3 & 4BR; 85%	Concrete garage Below ground	SF-MR-2
SF-AFF-3	San Francisco	Small	Apartments	Wood frame 3 stories; Concrete platform	Studios; 100%	Concrete garage Semi-submerged Not for tenants	None
SF-AFF-4	San Francisco	Large	Apartments	Wood frame 3 story Concrete slab	1BR; 50% 2BR; 25% 3BR; 25%	Concrete garage On grade	SF-MR-1
SF-MR-1	San Francisco	Large	Apartments	Wood frame 4 story/6 story	Studios: 25% 1BR: 35% 2BR; 40%	Concrete garage On grade & Open visitor	SF-AFF-4
SF-MR-2	San Francisco	Small	Condominiums	Wood frame 4 story	1BR; 10% 2BR; 90%	Concrete garage Semi-submerged	SF-AFF-2
SF-MR-3	San Francisco	Small	Tow nhomes	Wood frame 3 story	2BR; 100%	Wood frame parking garage.	SF-AFF-1
S.ALA-AFF-1	Fremont	Medium	Apartments	Wood frame 2 story/3 story	3BR; 40% 2BR; 60%	Carport & Open	SALA-MR-1
S.ALA-AFF-2	Hayw ard	Small	Apartments (disabled)	Wood frame 2 story	2BR; 40% 1BR; 60%	Open parking	None
S.ALA-MR-1	Hayw ard	Medium	Apartments	Wood frame 3 story	1BR; 50% 2BR; 50%	Carport	SALA-AFF-1
S.ALA-MR-2	Fremont	Large	Apartments	Wood frame 4 story	1BR; 50% 2BR; 50%	Concrete garage On grade	None

Appendix: Summary of Project Characteristics

Central Valley

Project I.D.	City	Size	Housing Type	Structure Type	Bedroom Mix	Parking Type	Pair
FRES-AFF-1	San Joaquin	Small	Tow n house & apartments	Wood frame 2 story	1BR; 10% 2BR; 50% 3+BR; 40%	Open parking	FRES-MR-1
FRES-AFF-2	Fresno	Large	Apartments	Wood frame 1 story/2 story	1BR; 25% 2BR; 25% 3BR; 50%	Carport & Open	FRES-MR-2
FRES-MR-1	Fresno	Medium	Apartments	Wood frame 1 story/2 story	1BR; 40% 2BR; 40% 3BR; 20%	Garage Carport Open parking	FRES-AFF-1
FRES-MR-2	Fresno	Large	Apartments	Wood frame 2 story	2BR; 80% 3BR; 20%	Garage Carport	FRES-AFF-2

Appendix: Summary of Project Characteristics

Los Angeles Basin

Project I.D.	City	Size	Housing Type	Structure Type	Bedroom Mix	Parking Type	Pair
LA-AFF-1	Los Angeles	Large	Apartments	Wood frame 2 story	1BR; 40% 2BR; 45% 3+BR; 15%	Open parking	None
LA-AFF-2	Los Angeles	Medium	Apartments	Wood frame 4 story	1BR; 15% 2BR; 60% 3+BR; 25%	Concrete garage On grade	None
LA-AFF-3	Los Angeles	Small	Apartments	Wood frame 2 story/3 story	Studio: 10% 1BR; 10% 2BR; 10% 3+BR: 70%	Concrete garage Below grade	LA-MR-2
LA-AFF-4	Los Angeles	Large	Apartments Retail mixed use	Wood frame over two levels concrete	Studios; 30% 1BR; 60% 2BR; 10%	Concrete garage On grade	LA-MR-4
LA-AFF-5	Los Angeles	Small	Apartments	Wood frame, 3 story	2BR; 60% 3BR; 40%	Concrete garage Semi-submerged	LA-MR-1
LA-MR-1	Los Angeles	Small	Apartments	Wood frame, 4 story	1BR; 30% 2BR; 70%	Concrete garage Below grade	LA-AFF-5
LA-MR-2	Los Angeles	Small	Apartments	Wood frame 2 story	2BR; 100%	Concrete garage Semi-submerged	LA-AFF-3
LA-MR-4	Los Angeles	Large	Apartments	Wood frame 4 story	1BR; 60% 2BR; 40%	Concrete garage On grade	LA-AFF-4
RIV-AFF-1	Riverside	Medium	Apartments	Wood frame 1 story/2 story	1BR; 100%	Open parking	RIV-MR-2
RIV-AFF-2	Blythe	Medium	Townhouses & Apartments	Wood frame 2 story	2BR; 40% 3BR; 60%	Carport	RIV-MR-1
RIV-AFF-3	San Jacinto	Medium	Apartments	Wood frame 2 story	2BR; 60% 3BR; 40%	Garages Carport Open parking	RIV-MR-3
RIV-AFF-4	Coachella	Medium	Apartments	Wood frame 2 story	2BR; 50% 3BR; 50%	Carport Open parking	None
RIV-MR-1	Blythe	Medium	Apartments	Wood frame 2 story	2BR; 50% 3BR; 50%	Carport Open parking	RIV-AFF-2
RIV-MR-2	Riverside	Medium	Apartments	Wood frame	1BR; 50% 2BR; 50%	Carport Open parking	RIV-AFF-1
RIV-MR-3	Hemet	Medium	Apartments	Wood frame 2 story	1BR; 40% 2BR; 60%	Garages Carport Open parking	RIV-AFF-3

Appendix: Summary of Project Characteristics

San Diego

Project I.D.	City	Size	Housing Type	Structure Type	Bedroom Mix	Parking Type	Pair
SD-AFF-1	San Diego	Small	Wood frame 1 story	Wood frame Concrete slab	Studios; 25% 1BR; 60% 2BR; 15%	Open parking	None
SD-AFF-2	San Diego	Small	Townhomes	Wood frame 2 story	3BR; 45% 4BR; 55%	Tandem stalls	SD-MR-2
SD-AFF-3	Chula Vista	Small	Townhomes Duplexes	Wood frame 2 story	3BR: 100%	Open parking	SD-MR-1
SD-MR-1	Imperial Beach	Small	Apartments	Wood frame 2 story	2BR: 100%	Concrete garage Semi-submerged	SD-AFF-3
SD-MR-2	Imperial Beach	Small	Townhomes (rental)	Wood frame 2 story	2BR; 100%	Garage Open parking	SD-AFF-2

SFMR1
Developer Type: For-Profit

This "large" project was designed for young professionals. The project has several four story buildings of wood frame construction and stucco exterior with a concrete podium parking garage. The project contains a mix of one bedroom/one bath and two bedroom/two bath units. Each unit includes a dishwasher, microwave, balconies or decks. Some units have fireplaces. Project amenities include an exercise room, elevators, security card system, pool, sauna, and recreation/meeting room.

The site is slightly irregular in shape and some toxic and other site difficulties reportedly affected development of the site. Project financing was obtained from bonds and conventional sources.

Project costs were reportedly impacted by payment of union wages.

SFMR1

COSTS PER UNIT	
Construction Costs	$72,202
On & Off-Site Costs	$3,893
Total Loan Costs	$9,601
Syndication Costs	$0
Architecture & Engineering	$4,956
Studies	$112
Legal	$740
Performance Bond	$464
Security	$478
Marketing	$2,918
Fees/Permits	$1,608
Construction Management	$0
Development Consultant	$0
Miscellaneous	$2,501
Total Soft Costs	$13,777
Reserves	$0
Development Fee	$4,771
Land	$27,658
Total Costs	$131,902
Adjusted Total Costs	$99,473

KEY VARIABLES	
Average SF/Unit	902
Persons/Unit	1.83
Bathrooms/Unit	1.31
Size Category	Large
Quality Rating	3
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	Yes
Design Review	Yes
Number of Equity Sources	1
Number of Debt Sources	5
Construction Contracting Process	OC
Union Labor	Yes
Built Density (Units per Acre)	110
Parking to Code	Yes

SFMR2
Developer Type: For-Profit

This "small" project, located in the City of San Francisco, was designed as condominiums for young professionals. The project consists of a five story building of wood frame construction and wood siding exterior, with podium parking. The project contains a mix of one bedroom/one bath and two bedroom/two bath units. Each unit has a microwave oven, dishwasher, washer/dryer hook-ups, and some units include a fireplace, patio, vaulted ceilings, and balconies. Project amenities include a security alarm, elevator, and meeting rooms.

The site is square in shape and had no significant design problems. There were no significant NIMBY issues. The project is in a redevelopment area.

SFMR2

COSTS PER UNIT	
Construction Costs	$133,950
On & Off-Site Costs	$0
Total Loan Costs	$25,729
Syndication Costs	$0
Architecture & Engineering	$11,350
Studies	$178
Legal	$2,456
Performance Bond	$900
Security	$0
Marketing	$0
Fees/Permits	$1,970
Construction Management	$0
Development Consultant	$0
Miscellaneous	$6,458
Total Soft Costs	$23,311
Reserves	$0
Development Fee	$14,964
Land	$16,339
Total Costs	$214,293
Adjusted Total Costs	$182,990

KEY VARIABLES	
Average SF/Unit	1,105
Persons/Unit	2.88
Bathrooms/Unit	1.89
Size Category	Small
Quality Rating	3
Non-Profit Sponsorship	No
NIMBY Issue	NA
Site Design Problems	NA
Design Review	NA
Number of Equity Sources	NA
Number of Debt Sources	NA
Construction Contracting Process	NA
Union Labor	NA
Built Density (Units per Acre)	75
Parking to Code	NA

SFMR3
Developer Type: For-Profit

This small project, located in the City of San Francisco, was designed as townhouse condominiums for young professionals and empty nesters. The project consists of a three story building of wood frame construction and wood siding exterior with individual at-grade parking garages. The project contains a mix of two bedroom/one bath and two bedroom/two bath units constructed as townhouses. Each unit has a refrigerator, washer/dryer, dishwasher, skylights, and small rear yard. Project amenities include a security system and modest landscaping along an interior driveway.

The project's irregular site affected its design and development. Project financing was from private equity and debt sources. Project costs were reportedly contained by use of a non-union contractor.

SFMR3

COSTS PER UNIT	
Construction Costs	$101,000
On & Off-Site Costs	$13,273
Total Loan Costs	$14,455
Syndication Costs	$0
Architecture & Engineering	$12,955
Studies	$818
Legal	$909
Performance Bond	$0
Security	$0
Marketing	$0
Fees/Permits	$4,091
Construction Management	$364
Development Consultant	$0
Miscellaneous	$1,136
Total Soft Costs	$20,273
Reserves	$0
Development Fee	$9,818
Land	$39,318
Total Costs	$198,136
Adjusted Total Costs	$149,000

KEY VARIABLES	
Average SF/Unit	1,073
Persons/Unit	3.00
Bathrooms/Unit	1.27
Size Category	Small
Quality Rating	3
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	Yes
Design Review	Yes
Number of Equity Sources	1
Number of Debt Sources	2
Construction Contracting Process	COMP
Union Labor	No
Built Density (Units per Acre)	20
Parking to Code	Yes +

SFAFF1
Developer Type: Non-Profit

This "small" project was designed for family households, and is targeted to tenants at 35 and 50 percent of median household income. The project is a four story, wood frame structure with a parking garage and contains a mix of two, three, and four bedroom units. Each unit has a balcony or opens onto the common courtyard. Project amenities include a community room and office.

The site is square in shape and there were no unusual problems associated with it, but the developer expended funds to shore up the existing foundation and adjacent structure. The site was acquired from a private organization at below-market rates. The developer reported a tough community battle due to NIMBY issues. In the end, this did not affect the approved density or project costs. RHCP and redevelopment funds were used.

The developer attributes the below-market land price and in-house construction management to a containment of project costs.

SFAFF1

COSTS PER UNIT	
Construction Costs	$105,084
On & Off-Site Costs	$4,116
Total Loan Costs	$2,542
Syndication Costs	$7,071
Architecture & Engineering	$7,479
Studies	$1,788
Legal	$2,033
Performance Bond	$0
Security	$0
Marketing	$306
Fees/Permits	$4,010
Construction Management	$0
Development Consultant	$0
Miscellaneous	$1,520
Total Soft Costs	$17,137
Reserves	$1,444
Development Fee	$18,728
Land	$22,341
Total Costs	$178,463
Adjusted Total Costs	$137,394

KEY VARIABLES	
Average SF/Unit	881
Persons/Unit	3.83
Bathrooms/Unit	1.47
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	Yes
Site Design Problems	No
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	4
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	80
Parking to Code	Yes

SFAFF2
Developer Type: Non-Profit

This "small" project was designed for families and is targeted to tenants at 50, 60, and 80 percent of median household income. The project also contains two market-rate units and a Section 8 unit. This project is a four story, wood and steel (first floor only) frame structure with a below-grade parking garage. The project contains a mix of three and four bedrooms units (and a single one bedroom unit). Each unit has a balcony. Project amenities include a community room.

The site is square in shape and there were no unusual problems developing it. The developer reported that the site may have saved them money, as they used the footprint of a pre-existing structure. The developer experienced no significant NIMBY problems from the neighborhood.

HODAG and local CDBG funds were used for this project. The developer reported that using in-house architects and construction managers helped contain project costs.

SFAFF2

COSTS PER UNIT	
Construction Costs	$138,933
On & Off-Site Costs	$0
Total Loan Costs	$9,649
Syndication Costs	$1,111
Architecture & Engineering	$10,670
Studies	$500
Legal	$3,898
Performance Bond	$1,808
Security	$2,143
Marketing	$0
Fees/Permits	$1,589
Construction Management	$0
Development Consultant	$0
Miscellaneous	$1,226
Total Soft Costs	$21,833
Reserves	$812
Development Fee	$16,250
Land	$21,957
Total Costs	$210,546
Adjusted Total Costs	$172,339

KEY VARIABLES	
Average SF/Unit	932
Persons/Unit	4.65
Bathrooms/Unit	1.85
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	4
Number of Debt Sources	3
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	90
Parking to Code	Yes

SFAFF3
Developer Type: Non-Profit

This "small" project was designed for seniors and disabled seniors and is targeted to tenants at 35 percent of median household income. The project is three story wood frame construction over a concrete parking garage and contains a mix of studios and one bedroom units. Project amenities include a community room and moderate landscaping.

The site is rectangular in shape and was acquired through an arranged long-term lease with the local housing agency. Negotiating with the housing authority was a difficultly mentioned by the developer. The developer also reported NIMBY issues which delayed development and resulted in a lower project density then originally planned.

Private grants, HUD, and local and regional funding sources were used for this project.

Project costs were reportedly impacted by difficulty negotiating the ground lease and a reduction in density due to NIMBYs.

SFAFF3

COSTS PER UNIT	
Construction Costs	$51,955
On & Off-Site Costs	$14,676
Total Loan Costs	$2,624
Syndication Costs	$0
Architecture & Engineering	$3,622
Studies	$333
Legal	$1,405
Performance Bond	$0
Security	$0
Marketing	$97
Fees/Permits	$2,466
Construction Management	$0
Development Consultant	$403
Miscellaneous	$704
Total Soft Costs	$9,030
Reserves	$0
Development Fee	$1,445
Land	$0
Total Costs	$79,698
Adjusted Total Costs	$78,252

KEY VARIABLES	
Average SF/Unit	395
Persons/Unit	1.02
Bathrooms/Unit	1.00
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	Yes
Site Design Problems	No
Design Review	Yes
Number of Equity Sources	3
Number of Debt Sources	3
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	90
Parking to Code	None

SFAFF4
Developer Type: Non-Profit

This "medium" project, located in the City of San Francisco, is targeted to tenants under 60 percent of median household income. The project is three stories in height, and is a wood frame structure over a concrete parking garage. The project contains one to three bedroom units. There are no balconies or patios. Project amenities include a child care center with a tot-lot, a community room, and an office.

The site is irregular in shape and was acquired from a local agency. There were a several problems associated with the site. Curved property lines created higher costs for design and construction; the soil quality required building on piles, which added costs; a serious toxic problem required a concrete covering of the entire site, adding substantial costs; and only one ingress/egress point complicated the design of the parking garage. The developer reported no significant NIMBY issues.

RHCP, SAMCO, and redevelopment funds were used for this project. Apart from the substantial costs due to problems associated with the site, the developer reported no specific causes for higher costs.

SFAFF4

COSTS PER UNIT	
Construction Costs	$95,164
On & Off-Site Costs	$2,717
Total Loan Costs	$3,994
Syndication Costs	$2,057
Architecture & Engineering	$6,944
Studies	$93
Legal	$648
Performance Bond	$0
Security	$0
Marketing	$370
Fees/Permits	$984
Construction Management	$0
Development Consultant	$0
Miscellaneous	$1,620
Total Soft Costs	$10,660
Reserves	$1,167
Development Fee	$17,318
Land	$0
Total Costs	$133,076
Adjusted Total Costs	$115,759

KEY VARIABLES	
Average SF/Unit	837
Persons/Unit	2.78
Bathrooms/Unit	1.56
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	Yes
Design Review	Yes
Number of Equity Sources	3
Number of Debt Sources	6
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	75
Parking to Code	Yes

SALAMR1
Developer Type: For-Profit

This "medium" sized project, located in Southern Alameda County, was designed for families, singles, young professional, and seniors. The project has many two and three story buildings, with wood frame construction and carport and open parking. The project contains a mix of one and two bedroom units. Each unit has a patio or balcony. Project amenities include a swimming pool, spa, tot lot, picnic tables, barbecue, and play area.

The site is slightly irregular in shape and was acquired partially through private land holdings and partially through an arms-length transaction. The site was difficult to develop due to its shape and significant slope. The developer reported no significant NIMBY issues and a generally supportive neighborhood. Two conventional financing sources were used.

SALAMR1

COSTS PER UNIT	
Construction Costs	$49,794
On & Off-Site Costs	$7,154
Total Loan Costs	$3,190
Syndication Costs	$0
Architecture & Engineering	$1,343
Studies	$80
Legal	$63
Performance Bond	$0
Security	$210
Marketing	$97
Fees/Permits	$2,079
Construction Management	$0
Development Consultant	$0
Miscellaneous	$295
Total Soft Costs	$4,166
Reserves	$0
Development Fee	$0
Land	$4,483
Total Costs	$68,788
Adjusted Total Costs	$64,305

KEY VARIABLES	
Average SF/Unit	878
Persons/Unit	2.25
Bathrooms/Unit	1.30
Size Category	Medium
Quality Rating	2.5
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	Yes
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	2
Construction Contracting Process	OC
Union Labor	Yes
Built Density (Units per Acre)	20
Parking to Code	Yes

SALAMR2
Developer Type: For-Profit

This "large" project, located in Southern Alameda County, was designed for higher income singles and young professionals. The project has many three story buildings, with wood frame construction and on-grade garage parking. The project contains a mix of one and two bedroom units. Each unit has a balcony and a fireplace. Amenities include a swimming pool and spa, a community room, and extensive landscaping.

The site is rectangular in shape. Site problems included some toxic work and an extensive city design review. The developer reported no NIMBY issues from the neighborhood. Conventional financing and HUD funds were used for this project.

SALAMR2

COSTS PER UNIT	
Construction Costs	$66,265
On & Off-Site Costs	$5,122
Total Loan Costs	$9,995
Syndication Costs	$0
Architecture & Engineering	$1,802
Studies	$0
Legal	$389
Performance Bond	$399
Security	$0
Marketing	$0
Fees/Permits	$9,440
Construction Management	$0
Development Consultant	$0
Miscellaneous	$684
Total Soft Costs	$12,714
Reserves	$3,301
Development Fee	$9,139
Land	$9,820
Total Costs	$116,356
Adjusted Total Costs	$97,397

KEY VARIABLES	
Average SF/Unit	828
Persons/Unit	1.68
Bathrooms/Unit	1.12
Size Category	Large
Quality Rating	3
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	Yes
Number of Equity Sources	3
Number of Debt Sources	2
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	35
Parking to Code	Yes

SALAAFF1
Developer Type: Non-Profit

This "small" project, located in Southern Alameda County, was designed for single-parent households on public assistance, and is targeted to tenants at 35, 50 and 80 percent of median household income. The project consists of two and three story, wood frame structures with carport and open parking. The project contains a mix of two and three bedroom units with patios/balconies. Project amenities include a community room, management office, tot lots, and moderate landscaping.

The site is rectangular and had no design problems. The site was acquired from a local school district, which paid for toxic remediation. The developer reported no NIMBY problems; this is partially due to the City's pre-selection of the site for affordable housing.

Tax credit, redevelopment funds, and private funds were used for this project. The developer attributes their success with this project to having established a good working relationship with their contractor. This developer brought their contractor into the design process, eliminating potential misinterpretation of specifications by sub-contractors.

SALAFF1

COSTS PER UNIT	
Construction Costs	$48,018
On & Off-Site Costs	$4,515
Total Loan Costs	$5,152
Syndication Costs	$727
Architecture & Engineering	$2,220
Studies	$0
Legal	$61
Performance Bond	$0
Security	$0
Marketing	$220
Fees/Permits	$10,077
Construction Management	$634
Development Consultant	$0
Miscellaneous	$1,336
Total Soft Costs	$14,548
Reserves	$1,220
Development Fee	$6,702
Land	$0
Total Costs	$80,882
Adjusted Total Costs	$74,179

KEY VARIABLES	
Average SF/Unit	976
Persons/Unit	3.77
Bathrooms/Unit	1.88
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	5
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	25
Parking to Code	Yes

SALAAFF2
Developer Type: Non-Profit

This "small" project, located in Southern Alameda County, is designed specifically for physically disabled tenants, and is targeted to households at 50 percent or below median household income. The project is a two story, wood frame structure with limited uncovered on-grade parking and contains a mix of one and two bedroom units. Each unit has a patio or balcony. Project amenities include a community room with a fireplace, kitchenette, manager's office, and meeting space.

The site was acquired at no cost from the City. There were no unusual problems associated with development of the site, but some utility pole relocation was necessary. The developer reported that the neighborhood was supportive; no NIMBY issues were encountered. The project was financed from HUD 202 funds as well as pre-development grant money from the City.

Project development was impacted by HUD 202 cost containment requirements.

SALAFF2

COSTS PER UNIT	
Construction Costs	$68,659
On & Off-Site Costs	$7,547
Total Loan Costs	$3,662
Syndication Costs	$0
Architecture & Engineering	$3,815
Studies	$143
Legal	$905
Performance Bond	$762
Security	$0
Marketing	$100
Fees/Permits	$5,577
Construction Management	$0
Development Consultant	$0
Miscellaneous	$686
Total Soft Costs	$11,987
Reserves	$0
Development Fee	$238
Land	$15,476
Total Costs	$107,570
Adjusted Total Costs	$91,856

KEY VARIABLES	
Average SF/Unit	621
Persons/Unit	2.07
Bathrooms/Unit	1.00
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	1
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	55
Parking to Code	No

FRESMR1
Developer Type: For-Profit

This "medium" project, located in the City of Fresno, was designed for young families and singles. All units are market rate. The project consists of two story, wood frame structures with a mix of open, carport, and garage parking. The project contains a mix of one, two, and three bedroom units. Lower level units have a private yard, while upstairs units have a small balcony. Project amenities include a community recreation room, management office, pool, membership health club, and extensive landscaping.

The site has an irregular shape. The project entailed the relocation of off-site utilities and several other off-site improvements. The developer reported minimal resistance to the project from neighbors and encountered no significant delays in obtaining approvals. There were no special design issues. Private equity and debt financing were used to construct the project.

Project costs were reportedly impacted by difficulty in obtaining financing, increasing local fees and charges, rising land costs, and increasing time for securing approvals.

FRESMR1

COSTS PER UNIT	
Construction Costs	$24,802
On & Off-Site Costs	$4,913
Total Loan Costs	$2,698
Syndication Costs	$0
Architecture & Engineering	$635
Studies	$111
Legal	$8
Performance Bond	$12
Security	$0
Marketing	$0
Fees/Permits	$1,706
Construction Management	$0
Development Consultant	$0
Miscellaneous	$214
Total Soft Costs	$2,687
Reserves	$0
Development Fee	$0
Land	$5,159
Total Costs	$40,258
Adjusted Total Costs	$35,099

KEY VARIABLES	
Average SF/Unit	824
Persons/Unit	2.64
Bathrooms/Unit	1.17
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	2
Construction Contracting Process	NEG
Union Labor	No
Built Density (Units per Acre)	15
Parking to Code	Yes +

FRESMR2
Developer Type: For-Profit

This "medium" sized project, located in Fresno County, was designed for large families at or below 60 percent of median household income. The project is composed of many two story and split level buildings, with wood frame construction and a stucco exterior. Parking includes garages, carports, and covered and open spaces. The project contains a mix of two and three bedroom units. Each unit has a patio or balcony. Project amenities include a swimming pool and storage area. Additionally the project includes an on-site day care referral service.

The site is rectangular in shape and no unusual design problems were experienced, but the developer had to pay additional fees as it was in an urban growth management area. The developer reported no significant NIMBY issues. Two conventional financing sources were used.

FRESMR2

COSTS PER UNIT	
Construction Costs	$35,442
On & Off-Site Costs	$5,672
Total Loan Costs	$2,644
Syndication Costs	$183
Architecture & Engineering	$410
Studies	$25
Legal	$0
Performance Bond	$0
Security	$0
Marketing	$0
Fees/Permits	$1,063
Construction Management	$0
Development Consultant	$0
Miscellaneous	$0
Total Soft Costs	$1,498
Reserves	$0
Development Fee	$6,583
Land	$2,292
Total Costs	$54,314
Adjusted Total Costs	$45,439

KEY VARIABLES	
Average SF/Unit	984
Persons/Unit	3.30
Bathrooms/Unit	1.43
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	2
Construction Contracting Process	OC
Union Labor	No
Built Density (Units per Acre)	20
Parking to Code	Yes +

FRESAFF1
Developer Type: For-Profit

This "small" project, located in Fresno County, is designed for low income families, and is targeted to tenants with incomes less than 60 percent of median household income. The project consists of one and two story, wood frame structures with uncovered on-grade parking and contains a mix of one to four bedroom units. Project amenities include a management office, tot lot, and light landscaping.

The site is rectangular and had no unusual problems associated with the design or approvals processing. The developer reported no significant NIMBY issues. The project was financed through the Farmer's Home Administration.

Project costs were reportedly impacted by length of permitting time and paperwork associated with public housing finance programs.

FRESAFF1

COSTS PER UNIT	
Construction Costs	$27,460
On & Off-Site Costs	$7,952
Total Loan Costs	$2,415
Syndication Costs	$602
Architecture & Engineering	$2,248
Studies	$79
Legal	$0
Performance Bond	$0
Security	$0
Marketing	$312
Fees/Permits	$2,536
Construction Management	$562
Development Consultant	$132
Miscellaneous	$110
Total Soft Costs	$5,979
Reserves	$868
Development Fee	$8,421
Land	$1,791
Total Costs	$55,488
Adjusted Total Costs	$45,275

KEY VARIABLES	
Average SF/Unit	874
Persons/Unit	3.63
Bathrooms/Unit	1.21
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	2
Construction Contracting Process	OC
Union Labor	No
Built Density (Units per Acre)	15
Parking to Code	Yes

FRESAFF2
Developer Type: For-Profit

This "large" project, located in Fresno County, was designed for families, elderly, and handicapped tenants at 60 percent of median household income. The project includes single story duplexes and a two-story apartment building with two elevators. The project has surface parking and contains a mix of one, two and three bedroom units. Project amenities include a tot-lot, community room, management office, and moderate landscaping.

The site is rectangular in shape. Sewer and water had to be brought to the site, which added on- and off-site costs. No NIMBY problems were reported by the developer; problems with vandalism, destruction of property, and theft were reported. City funds, HUD, SAMCO, and a conventional loan were used.

Project costs reportedly were impacted by vandalism and prevailing wage requirements.

FRESAFF2

COSTS PER UNIT	
Construction Costs	$27,456
On & Off-Site Costs	$2,303
Total Loan Costs	$2,237
Syndication Costs	$141
Architecture & Engineering	$478
Studies	$0
Legal	$135
Performance Bond	$0
Security	$0
Marketing	$0
Fees/Permits	$973
Construction Management	$0
Development Consultant	$0
Miscellaneous	$106
Total Soft Costs	$1,691
Reserves	$0
Development Fee	$0
Land	$3,734
Total Costs	$37,563
Adjusted Total Costs	$33,829

KEY VARIABLES	
Average SF/Unit	782
Persons/Unit	3.38
Bathrooms/Unit	1.51
Size Category	Large
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	3
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	10
Parking to Code	Yes

LAMR1
Developer Type: For-Profit

This "small" project, located in the City of Los Angeles, was designed for young professionals, singles, and families. The project, a four story building with wood frame construction and a subterranean parking garage, contains a mix of one and two bedroom units. Each unit has a balcony or patio. Project amenities include a lobby, hot tub, and landscaped courtyard.

The site is rectangular in shape. The developer reported the site was relatively easy to develop except for a toxic problem. The developer reported no NIMBY problems were experienced in the neighborhood. Conventional financing was used for this project.

The project developer stated that costs could have been reduced with tighter cost controls and construction scheduling.

LAMR1

COSTS PER UNIT		KEY VARIABLES	
Construction Costs	$60,196	Average SF/Unit	789
On & Off-Site Costs	$5,977	Persons/Unit	2.50
Total Loan Costs	$4,987	Bathrooms/Unit	1.67
Syndication Costs	$0	Size Category	Small
Architecture & Engineering	$2,211	Quality Rating	2
Studies	$997	Non-Profit Sponsorship	No
Legal	$1,349	NIMBY Issue	No
Performance Bond	$0	Site Design Problems	No
Security	$0	Design Review	No
Marketing	$0	Number of Equity Sources	1
Fees/Permits	$3,169	Number of Debt Sources	1
Construction Management	$0	Construction Contracting Process	OC
Development Consultant	$0	Union Labor	No
Miscellaneous	$1,185	Built Density (Units per Acre)	115
Total Soft Costs	$8,911	Parking to Code	Yes
Reserves	$0		
Development Fee	$0		
Land	$38,167		
Total Costs	$118,239		
Adjusted Total Costs	$80,071		

LAMR2
Developer Type: For-Profit

This "small" project located in the City of Los Angeles was designed for families. The project is a two story building with wood frame construction and semi-subterranean parking. The project contains a mix of one and two bedroom units. Each unit has a balcony or patio. Project amenities include a recreation room and minimal landscaping.

The site is slightly irregular in shape and development was affected by a medium slope, the irregular shape, and an extensive design review by the City. The developer reported a supportive neighborhood and no NIMBY issues. Conventional financing was used for this project.

LAMR2

COSTS PER UNIT	
Construction Costs	$54,302
On & Off-Site Costs	$1,899
Total Loan Costs	$5,803
Syndication Costs	$100
Architecture & Engineering	$1,500
Studies	$0
Legal	$0
Performance Bond	$409
Security	$0
Marketing	$200
Fees/Permits	$4,500
Construction Management	$0
Development Consultant	$0
Miscellaneous	$1,100
Total Soft Costs	$7,709
Reserves	$0
Development Fee	$3,000
Land	$14,918
Total Costs	$87,731
Adjusted Total Costs	$69,813

KEY VARIABLES	
Average SF/Unit	704
Persons/Unit	2.93
Bathrooms/Unit	1.65
Size Category	Small
Quality Rating	1.5
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	1
Construction Contracting Process	COMP
Union Labor	No
Built Density (Units per Acre)	55
Parking to Code	Yes

LAMR4
Developer Type: For-Profit

This "large" project, located in the City of Los Angeles, was designed for young professionals. The project consists of a four story building of wood frame construction and stucco exterior, with an underground two level concrete parking structure. The project contains a mix of one bedroom/one bath and two bedroom/two bath units. Each unit has a microwave oven, dishwasher, washer/dryer hook-ups, and a patio or balcony. Project amenities include a pool and spa, sauna, recreation room, and an exercise room.

The site is irregularly shaped, which posed design and construction staging problems. There were no significant NIMBY issues. The project is located in a redevelopment area.

Project costs were impacted by the high level of amenities needed to market the project, and by site and construction staging issues. The developer reported some relief from local building code regulations which, if applied, would have resulted in higher construction costs.

LAMR4

COSTS PER UNIT		KEY VARIABLES	
Construction Costs	$56,315	Average SF/Unit	782
On & Off-Site Costs	$1,613	Persons/Unit	2.10
Total Loan Costs	$5,020	Bathrooms/Unit	1.40
Syndication Costs	$0	Size Category	Large
Architecture & Engineering	$0	Quality Rating	3
Studies	$0	Non-Profit Sponsorship	No
Legal	$262	NIMBY Issue	No
Performance Bond	$0	Site Design Problems	Yes
Security	$0	Design Review	Yes
Marketing	$0	Number of Equity Sources	2
Fees/Permits	$4,032	Number of Debt Sources	2
Construction Management	$0	Construction Contracting Process	OC
Development Consultant	$0	Union Labor	Yes
Miscellaneous	$0	Built Density (Units per Acre)	110
Total Soft Costs	$24,331	Parking to Code	Yes +
Reserves	$8,065		
Development Fee	$0		
Land	$12,097		
Total Costs	$107,440		
Adjusted Total Costs	$95,343		

LAAFF1
Developer Type: For-Profit

This "large" project, located in the City of Los Angeles, was designed for small households and families, and is targeted to tenants at 50 and 60 percent of median household income. The project is a two story building with wood frame construction and uncovered on-grade parking. The project contains a mix of one, two, three, four and five bedroom units. Each unit has a patio or balcony. Project amenities include a community room with kitchen, resident's association office, management office, tot lots, and extensive landscaping.

The site is slightly irregular and had no unusual design problems, but the developer reported extensive design review. There were no significant NIMBY issues. Tax credit, redevelopment and bank-consortium funds were used.

Project costs were reportedly impacted by difficulty in obtaining and coordinating financing sources, multiple local agency review, prevailing wage requirements, inconsistent and excessive design review standards, and requirement for performance bonds.

LAAFF1

COSTS PER UNIT	
Construction Costs	$37,457
On & Off-Site Costs	$2,795
Total Loan Costs	$2,961
Syndication Costs	$589
Architecture & Engineering	$2,309
Studies	$76
Legal	$576
Performance Bond	$277
Security	$0
Marketing	$277
Fees/Permits	$3,285
Construction Management	$0
Development Consultant	$0
Miscellaneous	$649
Total Soft Costs	$7,449
Reserves	$0
Development Fee	$5,640
Land	$17,417
Total Costs	$74,309
Adjusted Total Costs	$51,252

KEY VARIABLES	
Average SF/Unit	639
Persons/Unit	2.63
Bathrooms/Unit	1.59
Size Category	Large
Quality Rating	2.5
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	4
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	25
Parking to Code	Yes

LAAFF2
Developer Type: For-Profit

This "medium" sized project, located in the City of Los Angeles, was designed for families, seniors, and disabled tenants and is targeted to households at 50 and 60 percent of median household income. The project contains four story buildings with wood frame construction and a subterranean parking garage. The project contains a mix of one, two, three, four, and five bedroom units. Each unit has a patio and some units have vaulted ceilings. Project amenities include a phone entry security system, a gated parking garage, extensive landscaping, a tot lot including recreational equipment, and a community room with kitchen and bathroom.

The site is rectangular in shape and is leased from the City. There were no unusual problems associated with development of the site. The developer reported a supportive neighborhood and no NIMBY issues. Tax credit, redevelopment, and other funds were used for this project.

Project costs reportedly were impacted by prevailing wage requirements.

LAAFF2

COSTS PER UNIT	
Construction Costs	$62,863
On & Off-Site Costs	$776
Total Loan Costs	$3,368
Syndication Costs	$106
Architecture & Engineering	$2,276
Studies	$130
Legal	$73
Performance Bond	$0
Security	$505
Marketing	$0
Fees/Permits	$4,105
Construction Management	$0
Development Consultant	$0
Miscellaneous	$610
Total Soft Costs	$7,699
Reserves	$0
Development Fee	$622
Land	$0
Total Costs	$75,434
Adjusted Total Costs	$74,812

KEY VARIABLES	
Average SF/Unit	898
Persons/Unit	2.63
Bathrooms/Unit	1.26
Size Category	Medium
Quality Rating	1.5
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	2
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	60
Parking to Code	Yes

LAAFF3
Developer Type: Non-Profit

This "small" project, located in the City of Los Angeles, was designed for families, seniors, and singles, and is targeted to households at 35 and 60 percent of median household income. The project has a three story and two story building with wood frame construction and a subterranean parking garage. The project contains a mix of studios, one, two, three, and four bedroom units. Each unit has a balcony or patio. Project amenities include an intercom security entrance system, security fencing, minimal landscaping, and a small common room.

The site is rectangular in shape. Some utility issues affected site development and some asbestos removal was required. Additionally, the site included a historic landmark which had to be renovated and incorporated into the project. The developer reported a generally supportive neighborhood with no NIMBY issues; however, incidents of vandalism were experienced.

Project costs reportedly were impacted by prevailing wage requirements, delays caused by difficulty in obtaining full use of the site, and the high cost of permits and fees.

LAAFF3

COSTS PER UNIT	
Construction Costs	$75,469
On & Off-Site Costs	$3,432
Total Loan Costs	$4,365
Syndication Costs	$2,371
Architecture & Engineering	$7,705
Studies	$281
Legal	$673
Performance Bond	$0
Security	$0
Marketing	$192
Fees/Permits	$3,759
Construction Management	$1,731
Development Consultant	$0
Miscellaneous	$3,584
Total Soft Costs	$17,925
Reserves	$2,038
Development Fee	$10,263
Land	$40,256
Total Costs	$156,278
Adjusted Total Costs	$105,759

KEY VARIABLES	
Average SF/Unit	796
Persons/Unit	3.08
Bathrooms/Unit	1.38
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	Yes
Design Review	Yes
Number of Equity Sources	2
Number of Debt Sources	4
Construction Contracting Process	COMP
Union Labor	Yes
Built Density (Units per Acre)	60
Parking to Code	No

LAAFF4
Developer Type: Non-Profit

This large project, located in the City of Los Angeles was designed for seniors. The project consists of a four story building of wood frame construction and stucco exterior over a two level concrete structure containing both a parking garage and neighborhood retail facilities. The project contains a mix of efficiency units, one bedroom/one bath, and two bedroom/two bath units. Each unit has a refrigerator, range with hood, and air conditioning. Project amenities include a security system, community room, sun rooms, and an interior courtyard with minimal landscaping.

The site is irregularly shaped, which resulted in higher site improvement costs. There were no significant NIMBY issues. The project is located in a redevelopment area.

Project financing was from both public and private debt sources and state and federal tax credits for equity. The developer reports that project costs were negatively impacted by prevailing wage requirements and high land costs.

LAAFF4

COSTS PER UNIT	
Construction Costs	$46,324
On & Off-Site Costs	$3,509
Total Loan Costs	$7,947
Syndication Costs	$301
Architecture & Engineering	$4,315
Studies	$144
Legal	$716
Performance Bond	$0
Security	$0
Marketing	$99
Fees/Permits	$1,929
Construction Management	$0
Development Consultant	$0
Miscellaneous	$1,763
Total Soft Costs	$8,966
Reserves	$0
Development Fee	$0
Land	$11,362
Total Costs	$78,409
Adjusted Total Costs	$67,047

KEY VARIABLES	
Average SF/Unit	690
Persons/Unit	1.50
Bathrooms/Unit	1.09
Size Category	Large
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	Yes
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	4
Construction Contracting Process	OC
Union Labor	Yes
Built Density (Units per Acre)	115
Parking to Code	Yes

LAAFF5
Developer Type: Non-Profit

This "small" project, located in the City of Los Angeles, is targeted to families at or under 60 percent of median household income. The three story buildings are of wood frame construction with stucco exterior and parking is provided in an on-grade concrete parking garage. The project contains a mix of two bedroom/one bath and three bedroom/1.5 bath units. Each unit has a dishwasher and patio or deck. Project amenities include recreational space, a security entrance, and two elevators.

The site includes two separate parcels of land. There was a toxic problem associated with the site which required some additional work on soils. Project financing was obtained from RHCP, private banks, local agencies and Tax Credits.

LAAFF5

COSTS PER UNIT	
Construction Costs	$81,477
On & Off-Site Costs	$2,188
Total Loan Costs	$3,664
Syndication Costs	$1,580
Architecture & Engineering	$3,840
Studies	$568
Legal	$250
Performance Bond	$311
Security	$1,273
Marketing	$387
Fees/Permits	$3,649
Construction Management	$0
Development Consultant	$150
Miscellaneous	$470
Total Soft Costs	$10,899
Reserves	$1,870
Development Fee	$7,825
Land	$23,625
Total Costs	$133,127
Adjusted Total Costs	$101,677

KEY VARIABLES	
Average SF/Unit	1,031
Persons/Unit	3.71
Bathrooms/Unit	1.24
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	Yes
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	5
Construction Contracting Process	COMP
Union Labor	Yes
Built Density (Units per Acre)	45
Parking to Code	Yes

RIVMR1
Developer Type: For-Profit

This "medium" project, located in a desert community in Riverside County, was designed for middle income families and singles. The project consists of two story, wood frame structures with carport parking and contains a mix of two and three bedroom units. Each unit has a patio or deck. Project amenities include a community room with gym equipment, pool table and big screen TV, management office, and moderate landscaping. An earlier phase located across the street has a pool and jacuzzi.

The site is rectangular and had no unusual design problems or obstacles to obtaining development approvals. Project financing was obtained from private banks and the CHFA bond program.

Project costs were reportedly impacted by increased fees and charges levied by local agencies.

RIVMR1

COSTS PER UNIT	
Construction Costs	$26,667
On & Off-Site Costs	$3,667
Total Loan Costs	$3,833
Syndication Costs	$0
Architecture & Engineering	$1,683
Studies	$0
Legal	$805
Performance Bond	$0
Security	$0
Marketing	$67
Fees/Permits	$3,333
Construction Management	$0
Development Consultant	$0
Miscellaneous	$600
Total Soft Costs	$6,488
Reserves	$0
Development Fee	$0
Land	$3,583
Total Costs	$44,238
Adjusted Total Costs	$40,655

KEY VARIABLES	
Average SF/Unit	928
Persons/Unit	3.85
Bathrooms/Unit	1.28
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	2
Construction Contracting Process	NEG
Union Labor	No
Built Density (Units per Acre)	20
Parking to Code	Yes

RIVMR2
Developer Type: For-Profit

This "medium" sized project, located in Riverside County, was designed for young singles. The project has two-story wood frame buildings with stucco exterior. Parking is partially covered surface and partially open surface. The project contains one and two bedroom units with patios or balconies. Project amenities include a swimming pool.

This site is rectangular in shape and experienced no unusual problems. The developer reported a supportive neighborhood and no significant NIMBY issues. Private funding sources were used for this project.

RIVMR2

COSTS PER UNIT	
Construction Costs	$26,647
On & Off-Site Costs	$4,256
Total Loan Costs	$2,927
Syndication Costs	$0
Architecture & Engineering	$1,578
Studies	$49
Legal	$0
Performance Bond	$1,129
Security	$0
Marketing	$194
Fees/Permits	$6,155
Construction Management	$0
Development Consultant	$0
Miscellaneous	$153
Total Soft Costs	$9,258
Reserves	$0
Development Fee	$816
Land	$12,738
Total Costs	$56,642
Adjusted Total Costs	$43,088

KEY VARIABLES	
Average SF/Unit	774
Persons/Unit	2.26
Bathrooms/Unit	1.50
Size Category	Medium
Quality Rating	1.5
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	NA
Number of Debt Sources	NA
Construction Contracting Process	COMP
Union Labor	No
Built Density (Units per Acre)	25
Parking to Code	NA

RIVMR3
Developer Type: For-Profit

This "large" project, located in Riverside County, was designed for middle income tenants. The project contains two story buildings of wood frame construction and stucco exterior, with a mix of carports, garages, and open parking. The project includes both one and two bedroom units. Each unit has a patio or deck. Project amenities include a club house with kitchen, tennis courts, swimming pool and spa, barbecue pit, tot lot, and grassy play area.

The site is slightly irregular in shape. Loose surface soil required soil compaction. City design review resulted in added costs, but reportedly improved the project. The developer reported minimal NIMBY issues in the neighborhood. Conventional financing was used.

Project costs were reportedly impacted by design changes as a result of the 1986 Tax Reform Act. Lowering of costs was achieved by good working relationships with project team and small on-site staff.

RIVMR3

COSTS PER UNIT	
Construction Costs	$31,225
On & Off-Site Costs	$4,901
Total Loan Costs	$1,908
Syndication Costs	$0
Architecture & Engineering	$1,126
Studies	$125
Legal	$0
Performance Bond	$0
Security	$165
Marketing	$0
Fees/Permits	$3,483
Construction Management	$0
Development Consultant	$0
Miscellaneous	$776
Total Soft Costs	$5,676
Reserves	$0
Development Fee	$802
Land	$4,304
Total Costs	$48,816
Adjusted Total Costs	$43,710

KEY VARIABLES	
Average SF/Unit	831
Persons/Unit	3.12
Bathrooms/Unit	1.54
Size Category	Large
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	Yes
Number of Equity Sources	2
Number of Debt Sources	1
Construction Contracting Process	OC
Union Labor	No
Built Density (Units per Acre)	15
Parking to Code	Yes

RIVAFF1
Developer Type: For-Profit

This "medium" project, located in Riverside County, was designed for senior citizens and disabled tenants with incomes at 50 and 60 percent of median household income. The project has wood frame construction in one and two story structures, with uncovered on-grade parking. The project contains all one bedroom units. Each unit has a small patio or balcony. Project amenities include a community room, library, medical examination room, barbecue area, beauty/barber shop, and moderate landscaping.

The site is rectangular and had no unusual development or design problems. The site was deeded to the project sponsor by a local non-profit organization. The developer reported having to respond to design review standards, which required the project to blend in with the surrounding low density neighborhood. There was a very cooperative neighborhood and no significant NIMBY issue. A combination of private financing, tax credits, and redevelopment funds were used for this project.

RIVAFF1

COSTS PER UNIT	
Construction Costs	$25,651
On & Off-Site Costs	$4,778
Total Loan Costs	$692
Syndication Costs	$1,733
Architecture & Engineering	$1,756
Studies	$82
Legal	$714
Performance Bond	$0
Security	$163
Marketing	$322
Fees/Permits	$5,025
Construction Management	$120
Development Consultant	$0
Miscellaneous	$198
Total Soft Costs	$8,380
Reserves	$0
Development Fee	$6,408
Land	$0
Total Costs	$47,643
Adjusted Total Costs	$41,234

KEY VARIABLES	
Average SF/Unit	550
Persons/Unit	1.50
Bathrooms/Unit	1.00
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	Yes
Number of Equity Sources	3
Number of Debt Sources	2
Construction Contracting Process	COMP
Union Labor	No
Built Density (Units per Acre)	25
Parking to Code	Yes

RIVAFF2
Developer Type: For-Profit

This "medium" sized project, located in Riverside County, was designed to serve low income tenants. The project has one and two stories structures of wood frame construction, with both carport and open parking. The project contains a mix of two and three bedroom units. Each unit has a small balcony or patio. Project amenities include a tot lot, extensive greenbelt area, and an office building.

The site is rectangular in shape and was transferred by the developer to a partnership for a price slightly below its appraised value. There were no unusual problems associated with the site, and no NIMBY issues were reported. CHFA and RHCP funds were used.

Project costs were reportedly impacted by a delay in RHCP loan closing.

RIVAFF2

COSTS PER UNIT	
Construction Costs	$34,755
On & Off-Site Costs	$7,850
Total Loan Costs	$2,754
Syndication Costs	$967
Architecture & Engineering	$1,332
Studies	$175
Legal	$457
Performance Bond	$0
Security	$3
Marketing	$0
Fees/Permits	$3,741
Construction Management	$0
Development Consultant	$112
Miscellaneous	$40
Total Soft Costs	$5,861
Reserves	$1,274
Development Fee	$8,461
Land	$3,571
Total Costs	$65,496
Adjusted Total Costs	$53,463

KEY VARIABLES	
Average SF/Unit	915
Persons/Unit	3.86
Bathrooms/Unit	1.57
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	3
Number of Debt Sources	3
Construction Contracting Process	NEG
Union Labor	No
Built Density (Units per Acre)	15
Parking to Code	Yes

RIVAFF3
Developer Type: For-Profit

This "medium" project, located in a desert community in eastern Riverside County, was designed for families, and is targeted to tenants at 35 and 60 percent of median household income. The project consists of two story, wood frame structures with garage, carport, and open parking and contains a mix of two and three bedroom units. Each unit has a patio or balcony. Project amenities include a tot lot, pool and spa, open space, and professionally-designed landscaping.

The site is slightly irregular in shape. Soils and drainage problems presented engineering problems. The developer reported that there was no reaction to the project from the surrounding neighborhood. Tax credit, CCRC, and RHCP funds were used for this project.

The developer attributed cost savings to his organization's combination of developer and contractor functions.

RIVAFF3

COSTS PER UNIT	
Construction Costs	$44,444
On & Off-Site Costs	$6,513
Total Loan Costs	$7,000
Syndication Costs	$891
Architecture & Engineering	$1,398
Studies	$268
Legal	$89
Performance Bond	$0
Security	$0
Marketing	$446
Fees/Permits	$10,273
Construction Management	$0
Development Consultant	$0
Miscellaneous	$369
Total Soft Costs	$12,844
Reserves	$908
Development Fee	$9,485
Land	$8,843
Total Costs	$90,928
Adjusted Total Costs	$72,600

KEY VARIABLES	
Average SF/Unit	946
Persons/Unit	3.64
Bathrooms/Unit	1.43
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	Yes
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	3
Construction Contracting Process	OC
Union Labor	No
Built Density (Units per Acre)	20
Parking to Code	Yes

RIVAFF4
Developer Type: Non-Profit

This "medium" sized project, located in Riverside County, was designed for farm worker families. The project consists of wood frame structures of both one and two stories, with carport and open parking. The project contains a mix of two and three bedroom units. Each ground floor unit has a patio. Project amenities include a large recreational playing field, two tot-lots, a sports court, a full basketball court, a community room, and an office.

The site is slightly irregular in shape and the developer reported two problems; poor soils for structural support, and the presence of existing power lines. No significant NIMBY problems were reported by the developer. Tax credits, State Rural Land Purchase Program, RHCP, CHFA, and City funds were all used for this project. The developer attributes cost savings to the experienced team of project consultants and contractors.

RIVAFF4

COSTS PER UNIT	
Construction Costs	$45,407
On & Off-Site Costs	$8,360
Total Loan Costs	$2,827
Syndication Costs	$3,530
Architecture & Engineering	$2,698
Studies	$211
Legal	$673
Performance Bond	$0
Security	$0
Marketing	$407
Fees/Permits	$6,479
Construction Management	$0
Development Consultant	$288
Miscellaneous	$477
Total Soft Costs	$11,233
Reserves	$1,469
Development Fee	$10,000
Land	$1,809
Total Costs	$84,634
Adjusted Total Costs	$72,826

KEY VARIABLES	
Average SF/Unit	982
Persons/Unit	3.81
Bathrooms/Unit	1.27
Size Category	Medium
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	Yes
Design Review	No
Number of Equity Sources	2
Number of Debt Sources	5
Construction Contracting Process	NEG
Union Labor	No
Built Density (Units per Acre)	5
Parking to Code	Yes

SDMR1
Developer Type: For-Profit

This "small" project, located in San Diego County, was designed for families and military personnel. This project is a two story wood frame building over a semi-subterranean gated parking structure. Several individual parking garages are also on-site. The project contains a mix of two and three bedrooms with balconies or decks. Project amenities include a security gate with intercom and extensive planter-box landscaping.

The site is square in shape and had no unusual design problems. The developer reported an extensive design review, which added costs to the project. No NIMBY issues were experienced in the neighborhood. Conventional financing sources were used.

Project costs reportedly were impacted by excessive design review and loss of density. The developer attributes a reduction in costs to a real estate downturn that reduced construction cost bids.

SDMR1

COSTS PER UNIT	
Construction Costs	$43,983
On & Off-Site Costs	$682
Total Loan Costs	$1,941
Syndication Costs	$0
Architecture & Engineering	$1,765
Studies	$159
Legal	$118
Performance Bond	$0
Security	$0
Marketing	$176
Fees/Permits	$5,176
Construction Management	$0
Development Consultant	$0
Miscellaneous	$353
Total Soft Costs	$7,747
Reserves	$0
Development Fee	$0
Land	$17,647
Total Costs	$72,001
Adjusted Total Costs	$54,354

KEY VARIABLES	
Average SF/Unit	847
Persons/Unit	3.62
Bathrooms/Unit	2.03
Size Category	Small
Quality Rating	2.5
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	Yes
Number of Equity Sources	1
Number of Debt Sources	2
Construction Contracting Process	COMP
Union Labor	No
Built Density (Units per Acre)	43
Parking to Code	Yes

SDMR2
Developer Type: For-Profit

This "small" project is located in San Diego County. The project consists of multiple two story townhouses of wood frame construction and stucco exterior with single car garages. The project contains exclusively two bedroom/1.5 bath units. Each unit has a patio. There were no special project amenities listed.

The site for this project is square in shape and was acquired by the developer several decades ago. Relocation of existing units was the primary difficulty associated with developing this site. The project was financed through conventional lenders.

Costs for this project were reportedly impacted by fees levied by a local agency, excessive design review, and costly environmental studies.

SDMR2

COSTS PER UNIT	
Construction Costs	$48,692
On & Off-Site Costs	$3,380
Total Loan Costs	$0
Syndication Costs	$0
Architecture & Engineering	$889
Studies	$0
Legal	$0
Performance Bond	$0
Security	$0
Marketing	$0
Fees/Permits	$3,708
Construction Management	$0
Development Consultant	$0
Miscellaneous	$256
Total Soft Costs	$4,853
Reserves	$0
Development Fee	$0
Land	$11,111
Total Costs	$68,036
Adjusted Total Costs	$56,925

KEY VARIABLES	
Average SF/Unit	1,050
Persons/Unit	3.00
Bathrooms/Unit	1.50
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	No
NIMBY Issue	No
Site Design Problems	No
Design Review	Yes
Number of Equity Sources	1
Number of Debt Sources	0
Construction Contracting Process	NEG
Union Labor	No
Built Density (Units per Acre)	15
Parking to Code	Yes

SDAFF1
Developer Type: Non-Profit

This "small" project, located in the City of San Diego, was designed for disabled tenants at 60 percent of median household income. The project consists of single story, wood frame structures with uncovered on-grade parking. The project contains a mix of studio, one, and two bedroom units. Project amenities include a community room with kitchen, management office, and extensive landscaping.

The site was acquired from a local agency, and land costs were written down from fair market value. There were no unusual problems associated with the site or surrounding neighborhood. This project was financed by HUD's 202 program.

Project costs were reportedly impacted by high land costs and the multitude of fees and special charges.

SDAFF1

COSTS PER UNIT	
Construction Costs	$36,969
On & Off-Site Costs	$6,669
Total Loan Costs	$4,930
Syndication Costs	$0
Architecture & Engineering	$1,950
Studies	$0
Legal	$225
Performance Bond	$392
Security	$0
Marketing	$0
Fees/Permits	$7,202
Construction Management	$0
Development Consultant	$760
Miscellaneous	$425
Total Soft Costs	$10,954
Reserves	$100
Development Fee	$0
Land	$12,250
Total Costs	$71,872
Adjusted Total Costs	$59,622

KEY VARIABLES	
Average SF/Unit	687
Persons/Unit	1.56
Bathrooms/Unit	1.00
Size Category	Small
Quality Rating	1.5
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	1
Construction Contracting Process	NEG
Union Labor	Yes
Built Density (Units per Acre)	15
Parking to Code	Yes

SDAFF2
Developer Type: Non-Profit

This "small" project, located in San Diego County, was designed for large families, and is targeted to tenants at 50 percent of median household income. The project is a two story building with wood frame construction and open parking and contains three bedroom townhouse units. Each unit has linoleum flooring and a rear patio. The only common facility is a laundry room.

The project is built on two rectangular sites which had unstable soils and drainage problems. Coastal permits and HUD review added a significant amount of time to the approvals process. The developer reported high crime, vandalism, and graffiti around project sites, but no NIMBY problems from neighbors. HUD and Housing Authority funds were used for this project.

SDAFF2

COSTS PER UNIT	
Construction Costs	$59,878
On & Off-Site Costs	$4,039
Total Loan Costs	$0
Syndication Costs	$0
Architecture & Engineering	$5,032
Studies	$346
Legal	$0
Performance Bond	$0
Security	$0
Marketing	$0
Fees/Permits	$4,995
Construction Management	$0
Development Consultant	$0
Miscellaneous	$0
Total Soft Costs	$10,373
Reserves	$0
Development Fee	$0
Land	$44,757
Total Costs	$119,047
Adjusted Total Costs	$74,290

KEY VARIABLES	
Average SF/Unit	1,056
Persons/Unit	4.50
Bathrooms/Unit	2.00
Size Category	Small
Quality Rating	1.5
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	Yes
Design Review	No
Number of Equity Sources	1
Number of Debt Sources	1
Construction Contracting Process	COMP
Union Labor	Yes
Built Density (Units per Acre)	30
Parking to Code	Yes

SDAFF3
Developer Type: Non-Profit

This "small" project, located in San Diego County, was designed for low income families at 35 percent of median household income. The project contains many two story wood frame buildings with open surface parking. The project contains all three bedroom units with patios. Project amenities include a meeting room.

The site is slightly irregular in shape and slightly sloped, which required fill. Additionally, the site required planning approval for rezoning and an extensive HUD loan approval process. The developer reported a supportive neighborhood with no significant NIMBY issues. HUD funds were used for this project and the City waived all fees.

Project costs reportedly were impacted by prevailing wage requirements, HUD loan processing time, extensive and lengthy design review, and Water Authority's involvement in the permitting process.

SDAFF3

COSTS PER UNIT	
Construction Costs	$49,480
On & Off-Site Costs	$10,986
Total Loan Costs	$0
Syndication Costs	$0
Architecture & Engineering	$4,000
Studies	$1,500
Legal	$239
Performance Bond	$909
Security	$0
Marketing	$0
Fees/Permits	$3,864
Construction Management	$0
Development Consultant	$0
Miscellaneous	$318
Total Soft Costs	$10,830
Reserves	$0
Development Fee	$2,273
Land	$19,773
Total Costs	$93,341
Adjusted Total Costs	$71,296

KEY VARIABLES	
Average SF/Unit	1,138
Persons/Unit	4.50
Bathrooms/Unit	1.50
Size Category	Small
Quality Rating	2
Non-Profit Sponsorship	Yes
NIMBY Issue	No
Site Design Problems	No
Design Review	No
Number of Equity Sources	0
Number of Debt Sources	1
Construction Contracting Process	COMP
Union Labor	Yes
Built Density (Units per Acre)	10
Parking to Code	Yes

APPENDIX D - ANALYSIS OF PROJECT PAIRS

This Appendix analyzes 14 pairs of projects culled from the larger sample. A summary of the analysis is contained in the body of the report.

Each pairing was made intentionally as part of the sample selection (see Methodology Section); it is important to note that the criteria used to match the pairs did not include any cost data and the matching of the pairs was done prior to any cost data collection.

Projects in each pair were selected to match each other as closely as possible for key characteristics including geographic location, housing type, total size and density, date of completion, parking type, construction type, quality, and bedroom mix. It should be noted that the pairs presented herein, while not perfectly matched, have enough similar characteristics to make a cost comparison meaningful. Characteristics that are different to a significant degree between projects in the pair are explicitly noted in the following discussion.

Bay Area Region

Comparison of SFMR1 and SFAFF4. Both projects are located in the City of San Francisco. The market rate project is a "large" project targeted to singles and young professionals. Since the project was financed with a state sponsored bond program, twenty percent of the units are set aside for moderate income tenants, and eighty percent are leased at market rates. The project consists of three structures, two four-story, wood-frame buildings and one concrete mid-rise building. Parking is contained in a semi-submerged concrete structure. The project bedroom mix consists of 70 percent studio and one bedroom units and 30 percent two bedroom units. Project amenities include a pool, spa, gym, and extensive landscaping. Overall, this project is rated as "above average" quality.

The affordable project is a "medium" project constructed by a non-profit organization and is targeted to tenants with incomes less than 60 percent of median household income. The project is three stories in height and is a wood frame structure over an at grade parking garage. The project bedroom mix consists of 45 percent one bedroom, 25 percent two bedroom and 30 percent three bedroom units. There are no balconies or patios. Overall, this project is rated as "average" quality.

There are several key differences in project characteristics. First, the market rate is approximately twice the size of the affordable, a difference in scale. It should be noted, however, that the two projects each have similar densities in the 100 to 110 units per acre range. Second, the market rate project contains one concrete residential structure and semi-submerged parking garage; this difference likely raises construction costs relative to the affordable project, which is entirely wood-frame and provides above grade structured parking in a concrete structure. Third, the affordable project is on a land lease and thus incurred no upfront land costs, while the market rate developer transferred its site to the development partnership for the land's appraised value. Fourth, the affordable project had three bedroom units. Fifth, the affordable project was required

by the City of San Francisco to provide individual entries for certain ground level units, which affects costs. Finally, the affordable site was highly irregular in shape, causing the need for a more complex design solution. Both sites have similar soil characteristics which required very similar mitigation strategies.

"Bottom Line" Comparison. This pair is illustrative of the need to carefully analyze all components of cost when assessing the broad issue of affordable versus market rate production costs. As shown in Table A-1, the total unadjusted costs per unit are almost the same for both projects in the pair; the market rate project had a total cost of $131,902 per unit compared to the affordable project at $133,076, a difference of only one percent.

On an adjusted basis, however, the affordable project had a 16 percent higher cost per unit. However, on an adjusted per person basis, the relative cost-effectiveness of the affordable project becomes apparent; the affordable project cost only about $42,000 per person housed, compared with about $54,000 for the market rate project, a difference of -23 percent. This result can be explained in part by analyzing the comparative sizes of the units, the number of persons per unit, and resulting space per person. In this case, the affordable project averaged smaller unit sizes, housed substantially more persons per unit, and, as a result, averaged substantially less space per person.

Component Analysis. A comparison of cost components between these two projects is interesting. For construction costs, the affordable project had 32 percent higher costs per unit, even though the market rate project had a higher cost type of construction (concrete) for one of its buildings as well as an overall higher quality rating. However, on a per person basis, the affordable project's construction costs were lower by 13 percent, due to a higher number of average persons housed per unit.

The higher affordable project's per unit construction costs cannot be explained by a difference in wage rates (both project used union labor), but might be attributable to its highly irregular site shape, a two-story living area with loft design in certain units, individual entries required by the local permitting agency, and more bathrooms per unit. Parking requirements do not explain any construction cost variations, since San Francisco's requirements are based on a per unit calculation. Moreover, the semi-submerged parking provided by the market rate project (which tends to be more expensive per stall than at-grade parking) would lead to higher costs per unit for the market rate project, and do not therefore explain the reverse situation.

On and off-site improvement costs and financing costs were both substantially lower for the affordable project. Financing costs were higher for the market rate, partly because it participated in a CHFA 80/20 bond program and incurred bond counsel, accounting, bond discount, and other costs of issuance. Interestingly, even soft costs were lower for the affordable project, partly due to the fact that the market rate project was the first project for its developer in San Francisco on a site with challenging soil conditions. Land was free for the affordable project, as compared to $28,000 per unit land costs for the market rate complex. Finally, quoted developer fee/overhead was higher for the affordable project.

Thus, when comparing on a per unit basis, the higher construction costs and developer fee for the affordable project were almost entirely offset by free land, lower soft costs, and lower on- and off-site improvement costs. On a per person basis, the cost-effectiveness of the affordable project is consistently lower.

This project serves to illustrate the complexity and uniqueness of each individual residential development project. Special circumstances, efficient design, public subsidies, and other factors can all combine to create two projects with seemingly similar costs (e.g., one percent difference on an unadjusted total per unit basis).

Table A-1: SFMR1 AND SFAFF4

	Market Rate	Affordable
Average SF/Unit	902	837
Persons/Unit	1.8	2.8
SF/Person	493	301
Bathrooms/Unit	1.31	1.56

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$72,202	$95,164	32%	$55,072	$51,389	-7%	$39,431	$34,259	-13%
On and Off-Site	$3,893	$2,717	-30%	$2,970	$1,467	-51%	$2,126	$978	-54%
Total Loan Costs	$9,601	$3,994	-58%	$7,323	$2,157	-71%	$5,243	$1,438	-73%
Syndication	$0	$2,057	NA	$0	$1,111	NA	$0	$740	NA
Total Soft Costs	$13,777	$10,660	-23%	$10,508	$5,756	-45%	$7,524	$3,838	-49%
Reserves	$0	$1,167	NA	$0	$630	NA	$0	$420	NA
Dev Fee	$4,771	$17,318	263%	$3,639	$9,352	157%	$2,606	$6,234	139%
Land	$27,658	$0	-100%	$21,096	$0	-100%	$15,105	$0	-100%
Total Costs	$131,902	$133,076	1%	$100,609	$71,861	-29%	$72,034	$47,908	-33%
Adjusted Total	**$99,473**	**$115,759**	**16%**	**$75,873**	**$62,510**	**-18%**	**$54,324**	**$41,673**	**-23%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of SFMR2 and SFAFF2. Both of these projects are in-fill developments located in the City of San Francisco. They are both "small" four story, wood-frame structures constructed over concrete parking garages. The market rate project has an at-grade concrete parking structure, while the affordable project has a below-grade parking structure. Each project has a fire sprinkler system, lobby security entry, elevator, and units with balconies.

The market rate project is a for-sale condominium project targeted to singles, married couples, and empty-nester households. It contains a mix of one and two bedroom units in stacked and townhouse configurations. Project amenities include meeting rooms, private storage lockers, and a sunken extensively landscaped interior garden/promenade. It has a quality rating of "above average."

The affordable project is targeted to families and contains a small amount of ground floor retail space. It was developed by a non-profit organization. The affordable project's bedroom mix consists of 20 percent one and two bedroom units, 50 percent three bedroom units, and 30 percent four bedroom units. Project amenities include a community room and a play structure for children. This project has a quality rating of "average."

There are several key differences between the projects. First, parking for the market rate project is provided in an at-grade parking structure, while the affordable project has a below-grade parking structure, which is generally more expensive to construct. Second, the market rate project had marketing costs associated with a condominium sales program; however, these costs have been subtracted from the cost data presented and analyzed in this report. Third, the bedroom mix is significantly different between the two projects, making per unit cost comparisons misleading. Fourth, the affordable project has a small quantity of ground floor retail space that likely overstates the cost to produce the residential portion of the project (no adjustment was made to exclude the retail space costs). Finally, the interior finish of the market rate project is of higher quality and likely more expensive than the affordable project's interior.

"Bottom Line" Comparison. This pair of projects appears, on both an unadjusted and adjusted per unit basis, to indicate a slightly lower cost for the affordable project (Table A-2). Although there was likely additional cost for the market rate project's overall higher quality finish; this was offset by the higher cost to provide more interior walls for three bedroom units and below-grade parking for the affordable project and by the cost to produce a small amount of ground floor retail space. On a per person basis, the affordable project was a substantial 42 percent lower than the market rate project, due to the affordable project's higher bedroom mix and smaller average unit sizes.

Component Cost Analysis. Construction costs and site improvement costs for the affordable project were slightly higher on a per unit basis than for the market rate project. If the market rate project were adjusted downwards by 10 percent to account for its condominium-quality finishes, the difference between the two projects would be even more pronounced. Explanatory factors include storage areas, separate dining rooms, larger kitchens, and a more expensive below-grade parking solution in the affordable project. Total soft costs were slightly lower for the affordable project across all measures. Financing costs were significantly lower for the affordable project. Land costs per unit were somewhat higher for the affordable project, even though it had substantially higher density (90 units per acre) than the market rate project (70 units per acre).

Table A-2 SFMR2 AND SFAFF2

	Market Rate	Affordable
Average SF/Unit	1,105	932
Persons/Unit	2.9	4.7
SF/Person	384	201
Bathrooms/Unit	1.89	1.85

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$133,950	$138,933	4%	$133,950	$44,817	-67%	$46,485	$29,878	-36%
On and Off-Site	$0	$0	0%	$0	$0	0%	$0	$0	0%
Total Loan Costs	$25,729	$9,649	-62%	$25,729	$3,113	-88%	$8,929	$2,075	-77%
Syndication	$0	$1,111	NA	$0	$358	NA	$0	$239	NA
Total Soft Costs	$23,311	$21,833	-6%	$23,311	$7,043	-70%	$8,090	$4,695	-42%
Reserves	$0	$812	NA	$0	$262	NA	$0	$175	NA
Dev Fee	$14,964	$16,250	9%	$14,964	$5,242	-65%	$5,193	$3,495	-33%
Land	$16,339	$21,957	34%	$16,339	$7,083	-57%	$5,670	$4,722	-17%
Total Costs	$214,293	$210,546	-2%	$214,293	$67,918	-68%	$74,366	$45,279	-39%
Adjusted Total	**$182,990**	**$172,339**	**-6%**	**$182,990**	**$55,593**	**-70%**	**$63,504**	**$37,062**	**-42%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of SFMR3 and SFAFF1. Both projects are "small" infill developments located in the City of San Francisco. Each consists of wood frame construction, with garage parking provided on-grade or on-site. The market rate project consists of for-sale townhomes designed for young professionals and empty nesters. It contains a mix of two bedroom/one bath and two bedroom/two bath units. Each unit has a refrigerator, washer/dryer, dishwasher, skylights, and small rear yard. Project amenities include a security system and modest landscaping. Overall, the project quality is above average.

The affordable project is targeted to low income families and its unit mix consists of fifty percent two bedroom units and fifty percent three and four bedroom units. It was developed by a non-profit corporation. Project amenities include a community room and courtyard. This project has an average quality rating.

There are several key differences between the two projects. First, the market rate project had marketing costs associated with a townhouse sale program; however, these costs have been subtracted from the costs data presented and analyzed in this report. Second, there are significant quality differences between the two projects, particularly with respect to interior appliances, carpeting, and finishes. Third, the market rate site is irregularly shaped which the developer reports as complicating both the design and approval process, resulting in higher costs. Fourth, units in the market rate project average 1,073 square feet, significantly larger than the 881 average square feet unit size in the affordable project. Finally, while the affordable housing project contractor was required to pay prevailing wages, the market rate contractor was non-union, resulting in a construction cost advantage to the market rate project.

"Bottom Line" Comparison. On both an unadjusted and adjusted total cost basis, the affordable project has lower costs across all measures (Table A-3). One would expect the market rate project to be somewhat more expensive due to its overall higher quality finish; this is offset, however, by the higher cost to provide more interior walls for the three and four bedroom units in the affordable project as well as the higher labor costs due to prevailing wage requirements. On a per person (adjusted) basis, the affordable project is approximately 28 percent less expensive than the market rate counterpart. This cost advantage can largely explained by the fact that the affordable project houses more people in smaller average unit sizes.

Component Cost Analysis. Per unit construction costs are nearly identical for the pair. On a per bedroom and per person housed basis, the affordable is 19 percent less expensive. The market rate project shows substantially higher on-site improvement costs due to its irregularly shaped site and the need to install utilities throughout the site. Total soft costs for the affordable project were 15 percent less expensive than the market rate project on a per unit basis and 34 percent less on a per bedroom and per person basis. The significant difference in development fee reflects the different financing and profit structure of the two projects. The affordable developer took a larger upfront fee out of the project while the market rate developer took a smaller fee (set as a percent of sales) and split the profit from condominium sales with its financial partner.

Land costs were higher for the market rate project: however, the affordable developer purchased its site at a below-market price estimated at $16,700 per unit below market value. With such an adjustment, land costs are almost identical on a per unit basis.

Table A-3: SFMR3 AND SFAFF1

	Market Rate	Affordable
Average SF/Unit	1,073	881
Persons/Unit	3.0	3.8
SF/Person	358	230
Bathrooms/Unit	1.27	1.47

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$101,000	$105,084	4%	$50,500	$41,120	-19%	$33,667	$27,413	-19%
On and Off-Site	$13,273	$4,116	-69%	$6,636	$1,611	-76%	$4,424	$1,074	-76%
Total Loan Costs	$14,455	$2,542	-82%	$7,227	$995	-86%	$4,818	$663	-86%
Syndication	$0	$7,071	NA	$0	$2,767	NA	$0	$1,844	NA
Total Soft Costs	$20,273	$17,137	-15%	$10,136	$6,706	-34%	$6,758	$4,470	-34%
Reserves	$0	$1,444	NA	$0	$565	NA	$0	$377	NA
Dev Fee	$9,818	$18,728	91%	$4,909	$7,328	49%	$3,273	$4,886	49%
Land	$39,318	$22,341	-43%	$19,659	$8,742	-56%	$13,106	$5,828	-56%
Total Costs	$198,136	$178,463	-10%	$99,068	$69,833	-30%	$66,045	$46,556	-30%
Adjusted Total	**$149,000**	**$137,394**	**-8%**	**$74,500**	**$53,763**	**-28%**	**$49,667**	**$35,842**	**-28%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of SALAMR1 and SALAAFF1. Both of these projects are "medium" sized apartment complexes, averaging 20 to 25 units per acre. The projects are located in different Southern Alameda County communities. The market rate project was designed for singles, young professionals, seniors, and families. This complex has two and three story buildings with wood frame construction; parking is in carports or open lots. The bedroom mix is evenly divided between one and two bedroom units. Each unit has a small balcony or patio. Amenities include a pool, spa, tot lot, picnic tables, barbecue, and play area. Overall, this project has a quality rating of slightly above average.

The affordable project, constructed by a non-profit organization, was designed for single parents households and is targeted to tenants at 35, 50, and 80 percent of median household income. This complex also has two and three story buildings with wood frame construction. Parking is in carports or open lots. The bedroom mix consists of 55 percent two and 45 percent three bedroom units. Each unit has a small balcony or patio. Amenities include a community room, management office, tot lots, and modest landscaping. Overall, this project has a quality rating of average.

There are five important characteristics that differentiate the two projects. First, the market rate and affordable projects are located in different but nearby cities in southern Alameda County (both to the west of the East Bay hills). This difference in location resulted in significantly different payments for fees and permits (see below). Second, the affordable project has a larger average unit size. Third, the market rate has a higher level of project amenities. Fourth, the affordable developer received a development fee and engaged a contractor, who took its standard contractor overhead and profit, while the market rate developer did not collect a development fee, but, acting as its own contractor, received a contractor's overhead and profit payment. Finally, with respect to land, the affordable project received its site free from a local agency, while the market rate project valued its site (which it had acquired many years before) at approximately $4,500 per unit.

"Bottom Line" Comparison. This pair of projects appears, on both an unadjusted and adjusted per unit basis, to indicate a higher cost for the affordable project (see Table A-4). However, on a per person basis, the affordable project was 31 percent lower than the market rate project. This can be partially explained by the comparison of average unit sizes, persons per unit, and resulting space per person. The affordable project has larger units on average, but houses more persons per unit and provides less space per person.

Component Cost Analysis. Construction costs and site improvement costs for the affordable project were lower across all measures, including on a per unit basis. It is important to note that contractors for both projects paid prevailing wages. In addition, the average unit sizes of the affordable project were substantially larger, and the affordable project had more bathrooms, on average, per unit. This construction cost difference probably reflects the fact that the market rate site had steep slopes and the affordable project was of slightly lower quality than the market rate with fewer project amenities.

Total financing, soft, and reserve costs for the affordable project were substantially higher than for the market rate project, resulting in an adjusted total per unit cost that was 15 percent higher

for the affordable project. Reviewing soft costs, the affordable developer reported having paid approximately $2,000 per unit for architectural services compared to only $1,051 per unit in the market rate case. There were no special design issues related to either the site or design review process that would account for this architectural cost difference. Furthermore, there were certain costs incurred by the affordable project but not the market rate, including a construction management fee ($634 per unit), tax credit syndication costs ($727 per unit), and capitalized reserves ($1,220 per unit). The most substantial difference in soft costs between the two projects was that the affordable project paid local development fees/permit charges in the amount of $10,100 per unit compared to the market rate project (in a different locality with a lower fee structure) of $2,100 per unit. Had the affordable project paid the same fees per unit as the market rate project, the per unit (adjusted) difference in total costs would drop from 15 percent to 3 percent.

This pair highlights the effect that high soft costs can have on total project costs.

Table A-4: SALAMR1 AND SALAFF1

	Market Rate	Affordable
Average SF/Unit	878	976
Persons/Unit	2.3	3.8
SF/Person	390	259
Bathrooms/Unit	1.30	1.88

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$49,794	$48,018	-4%	$33,196	$19,687	-41%	$22,131	$12,743	-42%
On and Off-Site	$7,154	$4,515	-37%	$4,770	$1,851	-61%	$3,180	$1,198	-62%
Total Loan Costs	$3,190	$5,152	61%	$2,127	$2,112	-1%	$1,418	$1,367	-4%
Syndication	$0	$727	NA	$0	$298	NA	$0	$193	NA
Total Soft Costs	$4,166	$14,548	249%	$2,778	$5,965	115%	$1,852	$3,861	108%
Reserves	$0	$1,220	NA	$0	$500	NA	$0	$324	NA
Dev Fee	$0	$6,702	NA	$0	$2,748	NA	$0	$1,779	NA
Land	$4,483	$0	-100%	$2,989	$0	-100%	$1,992	$0	-100%
Total Costs	$68,788	$80,882	18%	$45,859	$33,161	-28%	$30,572	$21,464	-30%
Adjusted Total	**$64,305**	**$74,179**	**15%**	**$42,870**	**$30,414**	**-29%**	**$28,580**	**$19,685**	**-31%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Fresno Region

Comparison of FRESMR1 and FRESAFF1. In this pair, the market rate project is a "medium" sized project, while the affordable project is in the "small" size category. Both, however, were built at a density of 12 to 18 units per acre.

The market rate project was developed by a local for-profit developer who had experience in the Fresno area. It was targeted to young families and singles, and has a mix of one and two story buildings with wood frame construction and wood siding exterior. Parking includes a mix of garages, carports, and open spaces. The bedroom mix includes 40 percent one bedrooms, 40 percent two bedrooms, and 20 percent three bedroom units. Each unit has a small balcony or patio. Amenities include a pool, and recreation/gym facilities. Overall, this project has an "average" quality rating.

The affordable project was developed by a for-profit housing developer who had substantial experience in residential construction. The project was designed for families, and is targeted to households at 60 percent of median household income. This complex contains a mix of one and two story structures. Construction is wood frame with wood siding exterior. Parking is provided in an open lot. The project's unit mix includes 10 percent one bedroom, 50 percent two bedroom, 30 percent three bedroom, and 10 percent four bedroom units. Amenities include a meeting room, management office, tot lot, and light landscaping. Overall, this project has an "average" quality rating.

There are several important characteristics that differentiate the two projects. First, while both projects have a similar average unit size, there are more bedrooms in the affordable project, resulting in a greater number of persons housed and fewer square feet per person. Second, the affordable and market rate projects are in different political jurisdictions, which resulted in variations in local fees and permit costs. Third, the two projects are of different scale, with the affordable project being smaller than the market rate. This difference in size may give economies of scale to the market rate project. Fourth, the market rate project has garage and carport parking, which is more expensive to build than surface lot parking, as provided by the affordable project. Finally, the developer of the affordable project served as its own contractor, and received both contractor's profit and a development fee. The market rate developer reported collecting only contractor overhead and profit and no developer fee.

"Bottom Line" Comparison. In this pair, the affordable project has higher total unadjusted development costs on a per unit basis, but is virtually the same on a per bedroom and per person housed basis (see Table A-5). On an adjusted total per unit basis, the affordable project is still higher. However, on a per person (adjusted) basis, the affordable project achieves slightly greater cost efficiency; the affordable units averaged $12,420 per person housed versus almost $13,280 for the market rate project, a difference of -6 percent.

Component Cost Analysis. Construction costs for the affordable project were slightly higher on a per unit basis and lower on a per bedroom and per person housed basis. It is important to note that neither project paid prevailing wages, so an imbalance in labor costs is not an explanation for the difference in hard costs. The construction cost difference probably reflects the fact that the

affordable project had larger units, on average, as well as more bathrooms per unit. Site improvements were significantly higher for the affordable project, reflecting the need for substantial grading.

Three cost categories appear to account for most of the total cost difference between the market rate and affordable projects. First, total soft costs were significantly higher for the affordable project. Part of the soft cost difference is due to variation in local fees; the affordable project's local fees/permit costs were 33 percent higher than the market rate project. Architectural and engineering fees were the same in absolute dollars for both projects, but are spread across fewer units in the affordable project's case. The affordable project also reported a construction management fee, developer fee, and developer consultant fee in addition to the contractor's overhead and profit charged to the project in construction costs. The construction management fees amounted to approximately $700 per unit and were incurred in spite of the fact that the affordable project developer served as its own contractor. Furthermore, there were certain costs incurred by the affordable project but not the market rate, including tax credit syndication costs ($601 per unit) and capitalized reserves ($868 per unit).

Table A-5: FRESMR1 AND FRESAFF1

	Market Rate	Affordable
Average SF/Unit	824	874
Persons/Unit	2.6	3.6
SF/Person	312	241
Bathrooms/Unit	1.17	1.21

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$24,802	$27,460	11%	$14,077	$11,342	-19%	$9,384	$7,561	-19%
On and Off-Site	$4,913	$7,952	62%	$2,788	$3,285	18%	$1,859	$2,190	18%
Total Loan Costs	$2,698	$2,415	-11%	$1,532	$997	-35%	$1,021	$665	-35%
Syndication	$0	$602	NA	$0	$248	NA	$0	$166	NA
Total Soft Costs	$2,687	$5,979	123%	$1,525	$2,469	62%	$1,017	$1,646	62%
Reserves	$0	$868	NA	$0	$359	NA	$0	$239	NA
Dev Fee	$0	$8,421	NA	$0	$3,478	NA	$0	$2,319	NA
Land	$5,159	$1,791	-65%	$2,928	$740	-75%	$1,952	$493	-75%
Total Costs	$40,258	$55,488	38%	$22,849	$22,919	0%	$15,233	$15,279	0%
Adjusted Total	**$35,099**	**$45,275**	**29%**	**$19,921**	**$18,701**	**-6%**	**$13,281**	**$12,467**	**-6%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of FRESMR2 and FRESAFF2. Both projects were developed by for-profit developers and are located within Fresno County in the same local jurisdiction. The market rate project is a "medium" sized project, while the affordable project is "large." The project densities fall within the 12 to 18 units per acre range.

The market rate project was originally built as a market rate project targeted to families, but later applied for and received a low income housing tax credit allocation. Since the developer built to market specifications, this project is classified as a market rate project. This complex has split level and two story buildings with wood frame construction and stucco exteriors. Parking included a mix of garages, carports, and open spaces. The project bedroom mix consists of 80 percent two bedroom and 20 percent three bedroom units; each unit has a patio or balcony. Amenities include a pool and storage area. Additionally the project includes an on-site day care referral center. Overall, this project is rated as "average" quality.

The affordable project was designed for families, elderly, and handicapped tenants and is targeted to households at 60 percent of median household income. This complex contains single story duplexes and a two story apartment building with two elevators. Construction is wood frame with siding exterior. Parking contains a single car garage for each duplex unit and open spaces for the two story building's tenants and guests. The bedroom mix consists of 25 percent one bedroom, 25 percent two bedroom, and 50 percent three bedroom units. Some units have a small private yard. Amenities include a meeting room, management office, tot lot, and modest landscaping. This project has been rated as "average" quality.

There are several important characteristics that differentiate the two projects. First, the affordable project contains a swimming pool and elevators, which add to project costs. Second, the market rate project has larger average units (984 square feet per unit) than the affordable project (782 square feet per unit), but almost the same average number of persons housed per unit, indicating a more efficient allocation of space per person on the affordable side. Third, the market rate developer, who was its own general contractor, received two sources of fee income: a development fee equivalent to $6,583 per unit, as well as contractor overhead and profit equal to $3,167 per unit. The affordable developer, which was a for-profit developer, had only contractor overhead and profit and did not report a developer overhead or developer fee.

"Bottom Line" Comparison. In this pair, the affordable project has lower development costs across all measures (see Table A-6). On an unadjusted total per unit basis, the affordable project is almost 33 percent lower in cost, even with somewhat higher soft costs and 63 percent higher per unit land costs. Most of this cost difference can be accounted for by the much larger average unit size of the market rate units.

On a per person (adjusted) basis, the affordable project maintains its greater cost efficiency; the affordable units averaged just under $10,000 per person housed versus almost $14,000 for the market rate project, a difference of -23 percent.

Component Cost Analysis. Construction costs were 23 percent lower for the affordable project on a per unit basis, but most of this difference can be accounted for by the significantly larger

average unit size in the market rate project. On and off-site costs were higher for the market rate because the developer incurred the expense of extending utilities to the site.

The market rate project experienced higher loan and syndication costs on a per unit, per bedroom, and per person basis. This reflects the situation of relatively fixed costs being spread across fewer units, bedrooms, and people; the market rate and affordable projects had expenses of the same magnitude in these categories. Soft costs were higher by 13 percent for the affordable project, largely due to higher architecture and engineering costs. With respect to development fees, the market rate project reported taking a fee while the affordable developer did not. Finally, land costs were significantly higher for the affordable than the market rate project, reflecting the fact that the affordable project site required less off-site expense.

Table A-6: FRESMR2 AND FRESAFF2

	Market Rate	Affordable
Average SF/Unit	984	782
Persons/Unit	3.3	3.4
SF/Person	298	232
Bathrooms/Unit	1.43	1.51

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$35,442	$27,456	-23%	$16,110	$12,191	-24%	$10,740	$8,127	-24%
On and Off-Site	$5,672	$2,303	-59%	$2,578	$1,022	-60%	$1,719	$682	-60%
Total Loan Costs	$2,644	$2,237	-15%	$1,202	$993	-17%	$801	$662	-17%
Syndication	$183	$141	-23%	$83	$63	-25%	$56	$42	-25%
Total Soft Costs	$1,498	$1,691	13%	$681	$751	10%	$454	$501	10%
Reserves	$0	$0	0%	$0	$0	0%	$0	$0	0%
Dev Fee	$6,583	$0	-100%	$2,992	$0	-100%	$1,995	$0	-100%
Land	$2,292	$3,734	63%	$1,042	$1,658	59%	$694	$1,105	59%
Total Costs	$54,314	$37,563	-31%	$24,688	$16,678	-32%	$16,459	$11,119	-32%
Adjusted Total	**$45,439**	**$33,829**	**-26%**	**$20,654**	**$15,020**	**-27%**	**$13,769**	**$10,013**	**-27%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Los Angeles Region

Comparison of LAMR1 and LAAFF5. Both projects are located within the City of Los Angeles. Both projects are "small." The market rate project, designed for young professionals, singles, and families, contains one building with four stories of wood frame construction and a stucco exterior over a concrete underground parking garage. The bedroom mix consists of 30 percent one bedroom and 70 percent two bedroom units; each unit has a small balcony or patio. The developer reported a problem with toxics, which required special site improvement treatment. Amenities include an interior courtyard and a spa. This project has an "average" quality rating.

The affordable project was designed for families, and is targeted to households at 60 percent of median household income or less. This complex contains three-story buildings over a at-grade concrete parking garage. Construction of residential living space is wood frame with a stucco exterior. The developer reported a problem with toxics on the site, which required soil aeration. The bedroom mix is evenly divided between two and three bedroom units. Amenities include an interior courtyard, recreation/after-school room for children, and extensive landscaping. Overall, this project has an "average" quality rating.

There are several important characteristics that differentiate the two projects. First, the market rate project has underground parking, which is typically more expensive to construct than at-grade parking structures such as that found in the affordable project. Second, the affordable project has two buildings on two nearby sites, which tends to increase timing and logistical issues for subcontractors working on the project. Thirdly, there is a difference in the experience levels of the developers; in the market rate case the developer has built a large number of similar projects, while in the affordable case, this project was its first apartment complex. Finally, the market rate project reported that it did not use union contractors, while the affordable project was required to pay prevailing wages.

"Bottom Line" Comparison. In this pair, on an unadjusted total per unit basis, the affordable project is approximately 13 percent higher in cost than its comparable market rate, even with lower on- and off-site and financing costs (see Table A-7). On an adjusted per unit basis the affordable is 27 percent higher. Most of this cost difference can be accounted for by the significantly larger unit size of the affordable units and the higher proportion of three bedroom units. Indeed, on a per bedroom and per person housed basis, the affordable project performs better; it is 24 percent lower than the market rate on an unadjusted basis and 14 percent lower on an adjusted total cost basis.

Component Cost Analysis. Because of the difference in garage parking (below-grade versus above-ground) and toxic problems, total construction costs were analyzed in conjunction with on- and off-site costs. The sum of both cost components per unit was $83,665 for the affordable project, approximately 26 percent higher than the $66,173 per unit for the market rate project. The construction cost disadvantage of the market rate project became positive for the affordable when compared on a per bedroom or per person housed basis; the affordable project is 14 percent lower than the market rate project for these measures, reflecting the cost impact of affordable units with larger unit sizes (1,031 square feet average size for affordable project versus 789 square feet for the market rate project).

Table A-7: LAMR1 AND LAAFF5

	Market Rate	Affordable
Average SF/Unit	789	1,031
Persons/Unit	2.5	3.7
SF/Person	316	278
Bathrooms/Unit	1.67	1.24

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$60,196	$81,477	35%	$36,117	$32,920	-9%	$24,078	$21,947	-9%
On and Off-site	$5,977	$2,188	-63%	$3,586	$884	-75%	$2,391	$589	-75%
Total Loan Costs	$4,987	$3,664	-27%	$2,992	$1,480	-51%	$1,995	$987	-51%
Syndication	$0	$1,580	NA	$0	$639	NA	$0	$426	NA
Total Soft Costs	$8,911	$10,899	22%	$5,347	$4,404	-18%	$3,565	$2,936	-18%
Reserves	$0	$1,870	NA	$0	$755	NA	$0	$504	NA
Dev Fee	$0	$7,825	NA	$0	$3,162	NA	$0	$2,108	NA
Land	$38,167	$23,625	-38%	$22,900	$9,545	-58%	$15,267	$6,364	-58%
Total Costs	$118,239	$133,127	13%	$70,943	$53,789	-24%	$47,295	$35,859	-24%
Adjusted Total	**$80,071**	**$101,677**	**27%**	**$48,043**	**$41,082**	**-14%**	**$32,029**	**$27,388**	**-14%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of LAMR2 and LAAFF3. Both of these projects are located within the City of Los Angeles. Both projects are "small," and are built in the 50 to 60 units per acre density range. The market rate project, targeted for families, contains one building with two stories of wood frame construction with a stucco exterior over a concrete semi-submerged parking garage. The project contains exclusively two bedroom units; each unit has a small balcony or patio. Amenities include a recreation room. This project has a quality rating of "slightly below average."

The affordable project was designed for families and seniors, and almost all the units are targeted to households at 60 percent of median household income or less. This complex contains a three-story wood frame building with a stucco exterior over a subterranean concrete parking garage. The project also contained a pre-existing structure which was renovated for housing. The bedroom mix consists 30 percent studio or one bedroom, 20 percent two bedroom, and 50 percent three or four bedroom units. Only a very small proportion of living units are provided by the existing structure. Amenities include a small common room and modest landscaping. This project has a quality rating of "average."

There are several important characteristics that differentiate these projects. First, the market rate project has semi-submerged parking, which is typically less expensive to construct than underground parking structures such as that found in the affordable project. Second, the affordable project has two buildings; one new construction, the other a rehabilitation of an existing structure. The developer reported that the presence of a existing structure resulted in expensive design solutions for the newly constructed buildings in order to match the character of the existing building. This added to design and construction costs. Finally, it is important to note that the market rate project reported that it did not use union contractors, while the affordable project was required to pay prevailing wages.

"Bottom Line" Comparison. In this pair, the affordable project is consistently higher in cost than the market rate project on every measurement basis (see Table A-8). On a total cost per unit (unadjusted) basis, the affordable project is 78 percent higher. On a per unit (adjusted) basis, the affordable difference drops to 51 percent higher than the market rate project. Even on the per person measure, the affordable project had a 44 percent (adjusted) higher cost than its market rate pair. Differences in unit size, persons per unit, square feet per unit and bathrooms per unit do not account for the dramatic disparity in costs between the projects. Differences in developer experience also do not help to explain the disparity; the market rate developer reported far fewer prior projects completed than the affordable project sponsor. Most likely, the more complex design requirements and prevailing wages account for most of this cost disparity.

Component Cost Analysis. The only lower cost component for the affordable project is financing costs. Otherwise, the affordable project is higher than the market rate for all components across all measures. The components which account for the bulk of the cost difference are construction costs, soft costs, syndication costs, and reserves. Higher construction costs for the affordable project can be attributed to both underground parking and payment of prevailing wages. Soft costs are high due to high architectural and engineering costs ($7,705 per unit) and legal, insurance, and accounting costs ($2,257 per unit). The site shape and restoration of an existing structure most likely account for some portion of higher architectural and engineering fees.

Table A-8: LAMR2 AND LAAFF3

	Market Rate	Affordable
Average SF/Unit	704	796
Persons/Unit	2.9	3.1
SF/Person	241	259
Bathrooms/Unit	1.65	1.38

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$54,302	$75,469	39%	$27,847	$35,039	26%	$18,565	$24,527	32%
On and Off-site	$1,899	$3,432	81%	$974	$1,593	64%	$649	$1,115	72%
Total Loan Costs	$5,803	$4,365	-25%	$2,976	$2,026	-32%	$1,984	$1,419	-28%
Syndication	$100	$2,371	2271%	$51	$1,101	2047%	$34	$771	2154%
Total Soft Costs	$7,709	$17,925	133%	$3,953	$8,322	111%	$2,636	$5,826	121%
Reserves	$0	$2,038	NA	$0	$946	NA	$0	$663	NA
Dev Fee	$3,000	$10,263	242%	$1,538	$4,765	210%	$1,026	$3,336	225%
Land	$14,918	$40,256	170%	$7,650	$18,690	144%	$5,100	$13,083	157%
Total Costs	$87,731	$156,278	78%	$44,990	$72,558	61%	$29,993	$50,791	69%
Adjusted Total	**$69,813**	**$105,759**	**51%**	**$35,801**	**$49,102**	**37%**	**$23,868**	**$34,372**	**44%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of LAMR4 and LAAFF4. Both of these projects are "large" complexes which are located in the City of Los Angeles. Both are four story wood frame structures built over two story concrete parking structures. Densities are similar for both projects, ranging from 100 to 115 units per acre. In both cases, project developers are for-profit organizations and both paid prevailing wages. The market rate project has one building with a stucco exterior over a two level parking garage (one level of parking is underground and the other level is semi-subterranean). The bedroom mix consists of 60 percent one bedroom and 40 percent two bedroom units; each unit has a patio of balcony with exterior storage. Project amenities are extensive, including a recreation room/gym, clubhouse, barbecue grills, pool and spa, and heavy landscaping. Overall, this project was rated as "above average" in quality.

The affordable project has one building with a stucco exterior over a two level, at-grade parking garage. It is targeted to seniors and hence its bedroom mix consists of 90 percent one bedroom and 10 percent two bedroom units; some units have a patio or balcony. Project amenities include community room, interior courtyard, reading room, and light landscaping. Overall, this project is rated as "average" in quality.

There are several key differences between the two projects. First, the affordable project is part of a mixed use retail/residential project. Costs have been allocated to residential and retail components by the developer, but such allocations are difficult to accurately make, and might bias the results. Second, the below-ground parking provided for the market rate project is more expensive to construct than the above-grade parking in the affordable project. Third, the amenities provided in the market rate project are so extensive that a significant cost difference could occur.

"Bottom-line" Comparison. In this pair, the market rate unadjusted total cost is significantly higher on a per unit basis and about even with the affordable on a per bedroom and per person measure (see Table A-9). On an adjusted total cost basis, the results are nearly the same; the affordable is less expensive on a per unit basis and nearly the same on a per bedroom and per person housed basis. The difference in unit size and bedroom mix accounts for most of this pattern. Since the affordable bedroom mix contains more one bedrooms relative to the market rate, the affordable project tends to show more favorable cost comparisons on a per unit basis. The average size of the affordable units is 690 square feet, in contrast to 782 for the market rate, further highlighting the reasons for a higher per unit market rate cost.

Component Cost Analysis. There are three cost components that together account for the bulk of the total cost difference between the market rate and affordable projects. Construction costs were significantly higher for the market rate project on a per unit basis, but converged much closer on the other measures, despite the greater number of project amenities for the market rate project. Total soft costs were significantly higher for the market rate project across all cost measures due to the project's location in a redevelopment area, use of CHFA bond money, and reported difficulties in site design and construction staging. Within soft costs, the market rate project reported paying approximately 70 percent more than the affordable in local fees and permits. The market rate also had a $8,065 per unit reserve requirement in contrast to the affordable which had no such requirement.

Table A-9: LAMR4 AND LAAFF4

	Market Rate	Affordable
Average SF/Unit	782	690
Persons/Unit	2.1	1.5
SF/Person	373	462
Bathrooms/Unit	1.40	1.09

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$56,315	$46,324	-18%	$40,248	$41,899	4%	$26,832	$30,985	15%
On and Off-Site	$1,613	$3,509	118%	$1,153	$3,174	175%	$768	$2,347	205%
Total Loan Costs	$5,020	$7,947	58%	$3,588	$7,188	100%	$2,392	$5,315	122%
Syndication	$0	$301	NA	$0	$273	NA	$0	$202	NA
Total Soft Costs	$24,331	$8,966	-63%	$17,389	$8,110	-53%	$11,593	$5,997	-48%
Reserves	$8,065	$0	-100%	$5,764	$0	-100%	$3,842	$0	-100%
Dev Fee	$0	$0	0%	$0	$0	0%	$0	$0	0%
Land	$12,097	$11,362	-6%	$8,646	$10,277	19%	$5,764	$7,600	32%
Total Costs	$107,440	$78,409	-27%	$76,787	$70,920	-8%	$51,191	$52,446	2%
Adjusted Total	**$95,343**	**$67,047**	**-30%**	**$68,141**	**$60,643**	**-11%**	**$45,427**	**$44,846**	**-1%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Riverside County

Comparison of RIVMR1 and RIVAFF2. Both projects were developed by for-profit developers, are "medium" in size, and fall within a 15 to 20 units per acre density range. In addition, they are located in the same local jurisdiction in Riverside County. Both provide parking in carports and open spaces. Neither was subject to prevailing wage requirements or used union contractors. The market rate project, designed for middle income families and seniors, consists of two story, wood frame construction with stucco exterior and carport as well as open parking. The bedroom mix is evenly divided between two and three bedroom units. Each unit has a patio or deck and dishwasher. Project amenities include a community room with exercise and recreational opportunities, and a common laundry room. This project has an "average" quality rating.

The affordable project consists of several one and two story buildings of wood frame construction and stucco exterior. The project contains a bedroom mix evenly divided between two and three bedroom units. Each unit has a small balcony or patio, dishwasher and trash compactor. Project amenities include a tot lot and greenbelt area. This project was rated as "average" quality.

There are two key differences between the two projects. First, even though overall project densities are comparable, the affordable project has a mixture of stacked flats and townhouses, compared to the market rate project which is entirely stacked units. Accordingly, the average number of units per building is significantly different: the market rate project has an average of eight units per building compared to only four units per building for the affordable project. This difference in building and unit configuration will have significant cost impacts as outlined below. Second, the affordable project provided more bathrooms per unit, on average, 1.57 bathrooms per unit for the affordable project compared to 1.28 bathrooms per unit for the market rate project. The affordable was nearly identical to the market rate with respect to other key variables such as average unit size, persons per unit, and square feet per person.

"Bottom Line" Comparison. In this pair, the affordable project had higher costs than the market rate project across all measures (see Table A-10). On a per unit adjusted basis, the affordable project was 32 percent higher than its comparison. On a per person basis (adjusted), the affordable project was still 31 percent higher.

Component Costs Analysis. Although the affordable project has higher total project costs, the component breakdown shows some variability by category. Construction costs were 30 percent higher for the affordable project by all measures. This is most likely explained by the greater number of exterior walls in the affordable project (since it has more buildings relative to its market rate pair). In addition, costs are likely higher due to the greater number of bathrooms per unit for the affordable project (1.57 per unit for the affordable project, and only 1.28 per unit for the market rate project). Other contributing cost factors are a greater number of interior walls in the affordable project to provide separate dining rooms, and staircases within the affordable townhouse units. The market rate project does not contain any townhouse units.

On- and off- site improvement costs were 114 percent higher for the affordable project on a per unit, per bedroom and per person basis, most likely reflecting the fact that the affordable project

required more interior roads and linear square feet of utilities to service a greater number of buildings. Neither the market rate nor affordable project developer reported any unusual site costs that negatively impacted costs. With respect to total loan costs and total soft costs, the affordable project experienced lower costs across all measures. Land costs were nearly identical for both projects.

Table A-10: RIVMR1 AND RIVAFF2

	Market Rate	Affordable
Average SF/Unit	928	915
Persons/Unit	3.9	3.9
SF/Person	241	237
Bathrooms/Unit	1.28	1.57

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$26,667	$34,755	30%	$10,390	$13,516	30%	$6,926	$9,011	30%
On and Off-Site	$3,667	$7,850	114%	$1,429	$3,053	114%	$952	$2,035	114%
Total Loan Cost	$3,833	$2,754	-28%	$1,494	$1,071	-28%	$996	$714	-28%
Syndication	$0	$967	NA	$0	$376	NA	$0	$251	NA
Total Soft Costs	$6,488	$5,861	-10%	$2,528	$2,279	-10%	$1,685	$1,520	-10%
Reserves	$0	$1,274	NA	$0	$496	NA	$0	$330	NA
Dev Fee	$0	$8,461	NA	$0	$3,291	NA	$0	$2,194	NA
Land	$3,583	$3,571	0%	$1,396	$1,389	-1%	$931	$926	-1%
Total Costs	$44,238	$65,496	48%	$17,236	$25,470	48%	$11,490	$16,980	48%
Adjusted Total	**$40,655**	**$53,463**	**32%**	**15,840**	**20,791**	**31%**	**$10,560**	**$13,861**	**31%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of RIVMR2 and RIVAFF1. Both projects are "medium" in size, fall within the 20 to 25 units per acre density range, and are located in the same local jurisdiction in Riverside County. The market rate project was designed for young singles, and has several two story buildings of wood frame construction and stucco exterior; parking is provided in both carports and open surface lots. The project contains a bedroom mix evenly divided between one and two bedroom units. Each unit has a patio or balcony and a dishwasher. Project amenities include a swimming pool. This project has a "slightly below average" quality rating.

The affordable project was designed for senior citizens and disabled tenants with incomes at 50 and 60 percent of median household income. The project has many one and two story buildings of wood construction and masonite siding, with surface open parking. The project contains exclusively one bedroom units. Each unit has a small patio or balcony. Project amenities include a community room, library, medical examination room, and a beauty/barber shop. This project is rated "average" in quality.

There are some important characteristics which differentiate the projects in this pair. First, the affordable project received its land free from a non-profit entity, while the market rate project purchased its site for $12,738 per unit. Second, the market rate units are contained in two-story eight-plexes compared to the affordable project which was configured into one story mix of four- and eight-plexes. Finally, the pre-development time for the affordable project was two years, mainly due to problems with design review and the approvals process. In contrast, the market rate project spent a total of four months in pre-development.

"Bottom Line" Comparison. In this pair, the affordable project is four percent less expensive than the market rate project on a per unit (adjusted) basis, but more expensive on a per person basis (see Table A-11), the reverse result expected for most pairs. This is because the affordable units were designed for elderly occupants, resulting in average units sizes of 550 square feet compared to 774 square feet for the market rate project.

Component Cost Analysis. Construction cost were four percent lower for the affordable project on a per unit basis but significantly higher on a per bedroom and per person housed basis. This cost difference can be explained by the fact that the affordable project has more buildings which increases the number of exterior walls. Site costs were higher for the affordable across all measures, probably due to the greater number of buildings and required utilities to service them. Total loan costs were 76 percent lower for the affordable project on a per unit basis. Another notable difference between the projects is that soft costs were lower for the affordable on a unit basis; this relationship shifts on a per person housed basis. The affordable project incurred syndication costs of approximately $1,733 per unit.

Table A-11: RIVMR2 AND RIVAFF1

	Market Rate	Affordable
Average SF/Unit	774	550
Persons/Unit	2.3	1.5
SF/Person	343	367
Bathrooms/Unit	1.50	1.00

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$26,647	$25,651	-4%	$17,707	$25,651	45%	$11,805	$17,101	45%
On and Off-Site	$4,256	$4,778	12%	$2,828	$4,778	69%	$1,885	$3,185	69%
Total Loan Cost	$2,927	$692	-76%	$1,945	$692	-64%	$1,297	$461	-64%
Syndication	$0	$1,733	NA	$0	$1,733	NA	$0	$1,155	NA
Total Soft Costs	$9,258	$8,380	-9%	$6,152	$8,380	36%	$4,101	$5,587	36%
Reserves	$0	$0	0%	$0	$0	0%	$0	$0	0%
Dev Fee	$816	$6,408	686%	$542	$6,408	1083%	$361	$4,272	1083%
Land	$12,738	$0	-100%	$8,465	$0	-100%	$5,643	$0	-100%
Total Costs	$56,642	$47,643	-16%	$37,639	$47,643	27%	$25,093	$31,762	27%
Adjusted Total	**$43,088**	**$41,234**	**-4%**	**$28,633**	**$41,234**	**44%**	**$19,089**	**$27,490**	**44%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

Comparison of RIVMR3 and RIVAFF3. These projects are located in Riverside County, but in different local jurisdictions. The market rate project is "large" in size while the affordable project is "medium" in size. The projects were built at 15 to 20 units per acre. Both projects in this pair were completed by for-profit developers, and each offers garage, carport and open parking.

The market rate project was targeted to attract middle income tenants. This project contains multiple two story buildings of wood frame construction and stucco exterior, with a combination of carport, garage, and open parking. The bedroom mix consists of 30 percent one bedroom and 70 percent two bedroom units. All units have balconies or patios, and include dishwashers, washer dryer hook-ups, ceramic tile kitchen counters, and vaulted ceilings (in second-story units). Project amenities include a swimming pool, hot tub, tennis courts, tot lot/play area, and a club house with a kitchen and a small exercise room. Overall, this project's quality is rated as "average."

The affordable project was designed for families and seniors at 35 and 60 percent of median household income. The project consists of two story, wood frame structures with stucco exterior and garage, carport, and open parking. The project contains a bedroom mix of 55 percent two bedroom and 45 percent three bedroom units. Each unit has a dishwasher and patio or balcony. Project amenities include a swimming pool, spa, tot lot, and a security gate. Overall, this project is rated as "average" quality.

There are several important aspects that differentiate the projects. Lower market rate project costs might be expected because the market rate project is significantly larger than the affordable project, resulting in potential economies of scale. In addition, the affordable project had higher local permits/fees due to its location in a different jurisdiction. The affordable project has a larger average size per unit, 946 square feet, versus only 831 square feet per unit for the market rate project, even though the difference in persons housed is much less (3.6 for the affordable compared to 3.1 for the market rate). However, the market rate project experienced several conditions that would lead to higher expected costs. The market rate project is built to condominium standards and has a subdivision map. The market rate project configured its units into six-, eight- and ten-plexes while the affordable project is eight-plexes. Also, the market rate project changed its original design during the pre-development stage, adding design improvements to help market the units.

"Bottom Line" Comparison. In this pair, the affordable project had higher costs across all measures, as seen in Table A-12. On a total adjusted cost per unit, the affordable project was 66 percent more expensive. On a per-person basis, the affordable project was 42 percent higher than its market rate pair. The most likely explanation for this difference is the large average unit size in the affordable project and scale economies enjoyed by the market rate project.

Component Cost Analysis. Construction costs for the affordable project were substantially higher, at 42 percent per unit; neither project used union labor or was required to pay prevailing wages, so this difference cannot be explained by that variable. The best explanatory factor is the larger unit size of the affordable (946 square feet) compared to the average market rate unit size (625 square feet). Other factors contributing to the affordable project's higher costs are staircases in the townhouse units and more exterior walls. On and off-site costs were lower for the affordable

since it had less on-site utility work than the market rate project. Total loan costs were also substantially higher for the affordable project. This may be explained, in part, by the fact that both projects incurred nearly identical amounts of construction interest, but spread the cost over a different unit base. In addition, the market rate obtained both construction and permanent financing in the form of a "mini-perm" loan, while the affordable project secured private construction financing and pieced together two sources of public financing.

Similarly, soft costs were also higher by a large margin for the affordable project across every measure. However, the bulk of this difference is due to variation in local permits and fees levied on the project. The market rate project paid approximately $3,500 per unit in local fees, compared to the affordable project, which paid just under $10,300 per unit, a difference of $6,800 per unit. If this difference were adjusted for the affordable project, the soft cost variation would drop to only six percent on a per unit basis. Land costs were also substantially higher for the affordable project, even though both projects were built at a density of 20 units per acre. This cost difference most likely arises from economies of scale in land acquisition as well as differences in neighborhood and site characteristics. Finally, the affordable project reported syndication ($891 per unit) and reserve costs ($908 per unit) that were not experienced by the market rate project.

Table A-12: RIVMR3 AND RIVAFF3

	Market Rate	Affordable
Average SF/Unit	831	946
Persons/Unit	3.1	3.6
SF/Person	266	260
Bathrooms/Unit	1.54	1.43

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$31,225	$44,444	42%	$15,004	$18,301	22%	$10,003	$12,200	22%
On and Off-Site	$4,901	$6,513	33%	$2,355	$2,682	14%	$1,570	$1,788	14%
Total Loan Cost	$1,908	$7,000	267%	$917	$2,882	214%	$611	$1,922	214%
Syndication	$0	$891	NA	$0	$367	NA	$0	$245	NA
Total Soft Costs	$5,676	$12,844	126%	$2,727	$5,289	94%	$1,818	$3,526	94%
Reserves	$0	$908	NA	$0	$374	NA	$0	$249	NA
Dev Fee	$802	$9,485	1083%	$385	$3,906	913%	$257	$2,604	913%
Land	$4,304	$8,843	105%	$2,068	$3,641	76%	$1,379	$2,427	76%
Total Costs	$48,816	$90,928	86%	$23,457	$37,441	60%	$15,638	$24,961	60%
Adjusted Total	**$43,710**	**$72,600**	**66%**	**$21,003**	**$29,894**	**42%**	**$14,002**	**$19,929**	**42%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead
Source: Bay Area Economics

San Diego

Comparison of SDMR1 and SDAFF3. Both of these "small" projects are located within San Diego County, but in different local jurisdictions. The market rate project consists of a two story building with wood frame construction and a stucco exterior over a semi-subterranean, gated parking garage. While parking is mainly provided the parking garage, there are individual garages for half the units. The bedroom mix consists of two bedroom flats and one three bedroom townhouse. Amenities include a balcony or deck and a security gate with intercom. This project is rated as "slightly above average" quality.

The affordable project was designed for families at 35 percent of median household income. The project consists of two story wood frame townhouses with stucco exterior. An open parking lot is provided for tenants and visitors. The project contains exclusively three bedroom units with rear patios. Amenities include a common meeting room. This project has an "average" quality rating.

There are several important characteristics that differentiate the two projects. First, the density of the two projects is different: 40 units per acre for the market rate project and ten units per acre for the affordable project. The major cost impact of this density variation is the structured parking provided by the market rate project. Second, the affordable project site was sloped, reportedly adding costs to site improvements for fill and grading. Third, the experience levels were slightly different between the affordable and market rate project; the affordable project was developed by a non-profit organization which had previously completed three similar projects, but this was the first project developed by the market rate developer. The affordable project spent four years in pre-development, mainly due to problems securing federal financing. In contrast, the market rate project spent 18 months in pre-development activities. Finally the market rate project was built with non-union labor, while the affordable was obligated by its funding source to pay prevailing wages.

"Bottom Line" Comparison. In this pair the affordable project had higher costs per unit on both an adjusted and unadjusted basis (see Table A-13). Total adjusted costs per unit were 31 percent higher for the affordable project. This differential drops to only 5 percent higher (adjusted) on a per person basis. At least part of this difference can be explained by the larger units in the affordable project that are housing more people; in addition the affordable project was also more generous with space on a per person housed basis.

Component Cost Analysis. Surprisingly, the affordable project reported construction costs only 12 percent higher per unit, even though the affordable project paid prevailing wages and had a significantly larger average unit size. Likely explanations of higher costs for the market rate project include its higher cost garage parking, and slightly higher number of bathrooms per unit.

On and off-site improvement costs varied dramatically between the two projects, with the affordable project reporting almost $11,000 per unit compared with only $680 per unit for the market rate project. This difference is explained partially by the difficulty of site development for the affordable project, including costs to mitigate site slope and bring in on-site sewer, water, and utilities. In addition, the affordable project reported off-site utility costs and the market rate project did not.

Soft costs were also 40 percent higher for the affordable project on a per unit basis. The higher soft costs for the affordable project were partially due to higher architectural design and engineering costs as well as the four years spent in pre-development. Local permits and fees were not a source of major cost variance between the two projects; the affordable project paid $3,900 per unit compared to $5,200 for the market rate project.

Table A-13: SDMR1 AND SDAFF3

	Market Rate	Affordable
Average SF/Unit	847	1,138
Persons/Unit	3.6	4.5
SF/Person	234	253
Bathrooms/Unit	2.03	1.50

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$43,983	$49,480	12%	$21,363	$16,493	-23%	$12,158	$10,996	-10%
On and Off-Site	$682	$10,986	1510%	$331	$3,662	1005%	$189	$2,441	1194%
Total Loan Cost	$1,941	$0	-100%	$943	$0	-100%	$537	$0	-100%
Syndication	$0	$0	0%	$0	$0	0%	$0	$0	0%
Total Soft Costs	$7,747	$10,830	40%	$3,763	$3,610	-4%	$2,141	$2,407	12%
Reserves	$0	$0	0%	$0	$0	0%	$0	$0	0%
Dev Fee	$0	$2,273	NA	$0	$758	NA	$0	$505	NA
Land	$17,647	$19,773	12%	$8,571	$6,591	-23%	$4,878	$4,394	-10%
Total Costs	$72,001	$93,341	30%	$34,972	$31,114	-11%	$19,903	$20,743	4%
Adjusted Total	**$54,354**	**$71,296**	**31%**	**$26,400**	**$23,765**	**-10%**	**$15,025**	**$15,844**	**5%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead
Source: Bay Area Economics

Comparison of SDMR2 and SDAFF2. Both projects are "small" rental townhouse projects located within San Diego County, but in different local jurisdictions. Densities for these project range between 15 and 30 units per acre. The market rate project consists of two story duplexes with wood frame construction and a stucco exterior. Parking for each unit includes a single car garage and one off-street space for guests. The project contains exclusively two bedroom units. Amenities include a small private patio for each unit and a common laundry room. Aside from landscaping, there are no other project amenities. This project has an overall quality rating of "average."

The affordable project was designed for large families and is targeted to tenants at 50 percent of median household income. This complex contains two story wood frame townhouses with stucco exteriors. Tandem parking is provided with covered stalls. The project contains exclusively three bedroom units with rear patios. There are no particular project amenities. Overall, this project is rated as "slightly below average" quality.

There are several important characteristics that differentiate these projects. First, the affordable project was built on two separate sites, which can result in timing and logistical issues for the contractor and subcontractors. Second, the market rate developer incurred no financing costs because the developer contributed cash as financing. The experience levels were different as well; the affordable project was the first for the non-profit organization, while the market rate developer was very experienced. The affordable project spent four years in pre-development, mainly due to problems closing its HUD financing. In marked contrast, the market rate project spent less than a year in pre-development activities. Fourth, the affordable developer faced higher land costs due to a policy decision to build housing in a higher cost neighborhood. Thus, land costs for one of the affordable sites was significantly higher ($82,000 per unit) than the market rate ($11,000 per unit). However, it is interesting to note that the other affordable site cost the same as the market rate site (approximately $11,000 per unit). (Note that the average price of land for the affordable project was approximately $44,700 per unit). Finally, the market rate project was built with non-union labor, while the affordable was obligated by its funding sources to pay prevailing wages.

"Bottom Line" Comparison. In this pair, the affordable project is more expensive on a per unit basis (adjusted), but less expensive on a per bedroom and per person basis (adjusted), indicating the difference in bedroom and bathroom mix as a key variable in comparing the projects (see Table A-14).

Component Cost Analysis. Construction costs are 23 percent higher for the affordable than the market rate project on a per unit basis. This difference might be accounted by the fact that even though the average size of market rate and affordable units was nearly identical, the affordable project had three bedroom units and two bathrooms per unit, compared to two bedroom and one and one half baths for the market rate project. Prevailing wages could also be an explanatory factor. Also, the affordable project was built on two sites in different neighborhoods, making construction logistics more difficult and expensive.

The largest difference between the two projects, however, is in soft and land costs. The extreme land cost differential is explained by the high cost of one of the affordable sites. The high land

cost is a direct result of a policy decision to locate affordable housing in a high cost neighborhood. The soft cost differential, which is in favor of the market rate project across all measures, is accounted for by significant differences in local permit and fee costs and architectural services. The affordable project paid approximately $5,000 per unit in fees while the market rate paid $3,700 per unit. With respect to architectural fees, the affordable developer paid $5,000 per unit compared to only $890 per unit for the market rate project, reflecting the fact that the affordable project spent four times as long in pre-development and also was negotiating with HUD on the size and design of the project. The low architectural costs for the market rate project are largely accounted for by the experience of the developer and general contractor who have worked together on many projects.

Table A-14: SDMR2 AND SDAFF2

	Market Rate	Affordable
Average SF/Unit	1,050	1,056
Persons/Unit	3.0	4.5
SF/Person	350	235
Bathrooms/Unit	1.50	2.00

	Per Unit			Per Bedroom			Per Person		
	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference	Market Rate	Affordable	Difference
Const Costs	$48,692	$59,878	23%	$24,346	$19,959	-18%	$16,231	$13,306	-18%
On and Off-Site	$3,380	$4,039	19%	$1,690	$1,346	-20%	$1,127	$898	-20%
Total Loan Costs	$0	$0	0%	$0	$0	0%	$0	$0	0%
Syndication	$0	$0	0%	$0	$0	0%	$0	$0	0%
Total Soft Costs	$4,853	$10,373	114%	$2,426	$3,458	43%	$1,618	$2,305	43%
Reserves	$0	$0	0%	$0	$0	0%	$0	$0	0%
Dev Fee	$0	$0	0%	$0	$0	0%	$0	$0	0%
Land	$11,111	$44,757	303%	$5,556	$14,919	169%	$3,704	$9,946	169%
Total Costs	$68,036	$119,047	75%	$34,018	$39,682	17%	$22,679	$26,455	17%
Adjusted Total	**$56,925**	**$74,290**	**31%**	**$28,463**	**$24,763**	**-13%**	**$18,975**	**$16,509**	**-13%**

Note: Adjusted total costs = Total costs - Land - Developer Fee/Overhead

Source: Bay Area Economics

APPENDIX E - SURVEY RESPONSES TO NIMBY ISSUES

SFAFF1:	Tough community battle. CUP fought and appealed.
SFAFF2:	No neighborhood opposition.
SFAFF4:	No problems. One neighbor complained about dust.
SFAFF3:	4 or 5 protested and got SF supervisors' attention. Delayed project 3-4 months. Lost 10 units and one story from project. Didn't want views blocked, and shabby next-door neighbors.
SALAAFF1:	No neighborhood problem because 300 foot radius encompassed only a fringe of homes. No response during public hearings. Part of city strategy with site selection.
SALAFF2:	No problems with neighbors.
SALAMR1:	No problems with neighborhood. Only 1 person appeared at planning commission hearing.
SALAMR2:	Since there was a lot of vacant land, no nimbys.
FRESMR1:	Some resistance to apartments from single-family--generally no opposition.
FRESMR2:	Experience with neighbors--None.
FRESAFF1:	No problems.
RIVMR1:	No problems. People preferred project to existing vacant lot.
RIVMR2:	Good experience with neighbors.
RIVMR3:	Minimal. No cost impact. No delays. No change in density.
RIVAFF3:	This project generated virtually no neighborhood response, either favorable or unfavorable.
RIVAFF1:	Neighbors very cooperative.
RIVAFF4:	No problems with neighbors. Non-profit developer had already done project next door.

LAMR1: No opposition from neighborhood.

LAAFF5: Very positive experience with neighborhood. Organized block clubs around the development. These block clubs were very supportive during the entire process.

LAAFF3: Generally supportive of project; like the fact that we have invested in their neighborhoods and made a visually pleasing project. We did experience some minor incidents of vandalism.

LAMR2: No interaction with neighbors. Neighborhood viewed new building as an asset.

LAMR4: No NIMBY problem

LAAFF2: Neighborhood very cooperative.

LAAFF1: Neighbors mostly supportive.

SDMR1: No NIMBY problems.

SDMR2: No problems. Supportive neighborhood.

SDAFF1: No problems with neighbors.

SDAFF2: No Nimby problem.

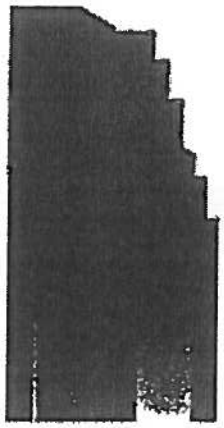
SDAFF3: Good experience with the neighborhood.

APPENDIX F - MULTIFAMILY RESIDENTIAL PARKING STANDARDS

By Region and Community

Region Community	Studio One bedroom	Two bedroom or more	Comments
City of San Francisco	NA	NA	Calculated per unit. 1 per 4DU in RC-4 and C-3 districts; 1 per 5DU if senior units.
Southern Alameda Co.			
Community #1	1.7	1.7	Calculated per unit.
Community #2	2	2	Calculated per unit.
City of Fresno	1.5	1.5	1 covered/.5 open guest space.
City of Los Angeles	NA	NA	Calculated based upon habitable rooms (HR). 1 if DU < 3 HR; 1.5 if DU=3 HR; and 2 if DU > 3 HR
Riverside County			
Community #1	1.5	2.0	
Community #2	1.5	2.0	
Community #3	1.5	1.5	Calculated per unit.
Community #4	1.5	1.75	Three Bedroom + = 2.0; lower requirement if covered space.
San Diego County			
Community #1	1.5	2.0	Includes one covered space.
Community #2	2.0	2.0	Calculated per unit.
Community #3	1.5	2.0	

APPENDIX G - REPORT ON PREVAILING WAGE COST IMPACTS



GARY W. ZINN & ASSOCIATES
10133 Riverside Drive
Toluca Lake, CA 91602
(818) 766-1355

October 19, 1992

Mr. Mike Reed
Local Initiatives Support Corporation
160 Sansome Street, 7th Floor
San Francisco, CA 94104

RE: **Prevailing Wage Study**

Dear Mr. Reed,

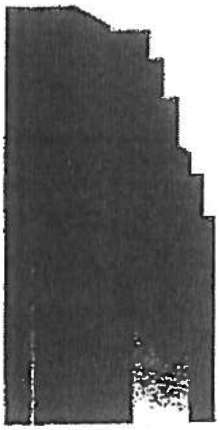
We have completed our study of the cost effects of prevailing wage requirements, as you requested, and are pleased to submit the attached report.

As you and I discussed on the phone, we considered several projects on which to base this comparison study. We selected a project located in the Los Angeles area that is a good sample of affordable housing.

Our report reflects labor rates based on prevailing wage and non-union. We broke out the costs ,using our standard method, which is a C.S.I. based approach. The rate amounts for each craft classification were based on several sources. We received the non-union from several sources, including local contractors and our own database. The prevailing rate amounts were the most difficult to confirm. However, we believe that they are as accurate as would be obtained by any bidding contractor.

It may help you to know that reduced rates are applied by the California Department of Industrial Relations for "residential" projects. Their commercial rates can be considerably higher and will be used, if the "awarding agency" doesn't request specific classifications of "residential" rates, in writing, 45 days in advance. Frequently, this is not done and the commercial rates are applied and required for the project. It was suggested to us that if the local agencies were better trained to request the residential rates, their costs could be lower. However, because the difference in cost between the non-union and the "residential" prevailing rates is still so great, this will not solve the big problem.

You asked us to include the added costs to the contractor for administration and overhead. It appears that there is much more involved than the items you suggested, such as bid preparation, preconstruction meeting, progress payments, etc. The following additional factors need to be considered:



As the cost for labor increases, other costs go up proportionally. For example, worker's comp, liability insurance and social security increase. The cost of documentation, monitoring and the risk of being fined for non-compliance add up significantly. Although difficult to measure, there is a fear factor with prevailing wage projects that decreases the number of qualified bidders. Competition is further reduced by the effects on bonding capacities.

These additional costs are reflected in the bids of the general contractor and effects the costs of every subcontractor. "General wisdom" among the developers and contractors building "affordable housing" is that the prevailing wage requirements add 30% to 45% to the hard costs of a project. Our study appears to confirm this general assumption.

We care about creating more affordable housing and hope that our study helps find ways to contain costs. The attached "sample" report represents our best opinion of the effects of prevailing wage requirements. If you have any questions about our report or how we reached our opinion, please don't hesitate to call.

Sincerely,

Chuck Hollins
Director of Operations

PROJECT BID COMPARISON

Project: New–construction, wood–frame, carports
Location: San Mateo County

CONTRACTOR:	A		B		C		D*	
	NonPrevail. Wage	Prevail Wage	NonPrevail. Wage	Prevail Wage	NonPrevail. Wage	Prevail Wage	NonPrevail. Wage	Prevail Wage
SUB–TOTAL LAND IMPROVEMENTS	193,362	195,222	179,808	199,336	114,793	123,794	158,440	158,440
SUB–TOTAL RESID. STRUCTURES	720,870	866,040	748,005	903,236	805,633	882,643	865,278	932,478
SUB–TOTAL ENTIRE PROJECT	914,232	1,061,262	927,813	1,102,572	920,426	1,006,437	1,023,718	1,090,918
GENERAL REQUIREMENTS	100,900	105,305	127,000	162,500	83,630	83,630	144,000	144,000
OVERHEAD AND PROFIT	83,748	97,520	95,000	115,000	65,264	70,854	76,782	76,782
GRAND TOTAL	1,099,880	1,264,087	1,149,813	1,380,072	1,069,320	1,160,921	1,244,500	1,311,700

PERCENTAGE DIFFERENCE:				
Prevailing Wage to Non–Union	13.07% Less	16.68% Less	7.89% Less	5.12% Less
PERCENTAGE DIFFERENCE:				
Non–Union to Prevailing Wage	15.03% More	20.03% More	8.57% More	5.40% More

* Contractor D is a signatory to union contracts.

PROJECT : AFFORDABLE HOUSING
ARCHITECT : N/A
LOCATION : LOS ANGELES, CALIFORNIA

OCTOBER 19, 1992
SPECIAL STUDY ESTIMATE
CWZ #1635552

SCOPE OF WORK: NEW APARTMENT UNITS

INDEX AND SUMMARY

AFFORDABLE HOUSING PROJECT
LOS ANGELES, CALIFORNIA
BID IN 1991
CONSTRUCTED IN 1992

TWENTY-TWO (22) NEW APARTMENT UNITS
UNDERGROUND PARKING
WOOD STUD CONSTRUCTION
LATH AND PLASTER EXTERIOR
ELEVATOR
ROOM A.C. UNITS
FIRE SPRINKLERS

	PAGE NUMBER	TOTAL COST
1. CONSTRUCTION COST – PREVAILING WAGE	1 – 11	$2,910,694
2. CONSTRUCTION COST – NON-UNION	12 – 22	$1,989,199
TOTAL DIFFERENCE		$921,399

PERCENTAGE DIFFERENCE NON-UNION TO PREVAILING WAGE	46%	MORE
PERCENTAGE DIFFERENCE PREVAILING WAGE TO NON-UNION	32%	LESS

PROJECT : AFFORDABLE HOUSING
ARCHITECT : N/A
LOCATION : LOS ANGELES, CALIFORNIA

OCTOBER 19, 1992
SPECIAL STUDY ESTIMATE
CWZ #1635551

SCOPE OF WORK: NEW APARTMENT UNITS

DESCRIPTION	QUANTITY	UNIT	MATERIAL UNIT COST	MATERIAL AMOUNT	LABOR UNIT COST	LABOR MHRS	LABOR RATE	LABOR AMOUNT	TOTAL AMOUNT
GRAND TOTAL SUMMARY - PREVAILING WAGE									
01 DEMOLITION	27,284	SF		$0				$0	$0
02 SITE WORK	27,284	SF		$80,165				$122,416	$202,581
03 CONCRETE	27,284	SF		$119,698				$263,207	$382,905
04 MASONRY	27,284	SF		$25,043				$33,254	$58,297
05 METALS	27,284	SF		$52,121				$18,830	$70,951
06 CARPENTRY	27,284	SF		$60,633				$236,780	$297,413
07 MOISTURE PROTECTION	27,284	SF		$26,214				$67,563	$93,777
08 DOORS AND WINDOWS	27,284	SF		$79,353				$52,856	$132,209
09 FINISHES	27,284	SF		$54,272				$349,344	$403,616
10 SPECIALTIES	27,284	SF		$8,519				$6,641	$15,160
11 EQUIPMENT	27,284	SF		$18,372				$6,794	$25,166
12 FURNISHINGS	27,284	SF		$66,803				$31,531	$98,334
13 SPECIAL CONSTRUCTION	27,284	SF		$0				$0	$0
14 CONVEYING SYSTEMS	27,284	SF		$47,500				$7,500	$55,000
15 MECHANICAL SYSTEMS	27,284	SF		$139,663				$269,521	$409,184
16 ELECTRICAL SYSTEMS	27,284	SF		$83,756				$237,829	$321,615
SUBTOTAL				$861,842				$1,704,366	$2,566,208
GENERAL CONDITIONS (7%)									$179,635
CONTINGENCY (0%)									$0
ESCALATION (0%)									$0
SUBTOTAL									$2,745,843
CONTRACTOR'S OVERHEAD/PROFIT (6%)									$164,751
TOTAL PROJECT									$2,910,594

PROJECT : AFFORDABLE HOUSING
ARCHITECT : N/A
LOCATION : LOS ANGELES, CALIFORNIA

OCTOBER 19, 1992
SPECIAL STUDY ESTIMATE
GWZ #163553

SCOPE OF WORK: NEW APARTMENT UNITS

DESCRIPTION	QUANTITY	UNIT	MATERIAL		LABOR				TOTAL
			UNIT COST	AMOUNT	UNIT COST	MHRS	RATE	AMOUNT	AMOUNT
GRAND TOTAL SUMMARY - NON UNION									
01 DEMOLITION	27,284	SF		$0				$0	$0
02 SITE WORK	27,284	SF		$80,165				$61,382	$141,547
03 CONCRETE	27,284	SF		$119,698				$142,918	$262,616
04 MASONRY	27,284	SF		$25,043				$26,127	$51,170
05 METALS	27,284	SF		$53,121				$13,323	$65,444
06 CARPENTRY	27,284	SF		$60,633				$128,569	$189,202
07 MOISTURE PROTECTION	27,284	SF		$26,214				$42,976	$69,190
08 DOORS AND WINDOWS	27,284	SF		$79,353				$31,892	$111,245
09 FINISHES	27,284	SF		$54,272				$175,689	$229,961
10 SPECIALTIES	27,284	SF		$8,519				$3,606	$12,125
11 EQUIPMENT	27,284	SF		$18,372				$3,699	$22,061
12 FURNISHINGS	27,284	SF		$66,503				$18,879	$85,382
13 SPECIAL CONSTRUCTION	27,284	SF		$0				$0	$0
14 CONVEYING SYSTEMS	27,284	SF		$47,500				$7,500	$55,000
15 MECHANICAL SYSTEMS	27,284	SF		$139,663				$124,377	$264,040
16 ELECTRICAL SYSTEMS	27,284	SF		$83,786				$111,066	$194,852
SUBTOTAL				$861,842				$891,993	$1,753,835
GENERAL CONDITIONS (7%)									$122,768
CONTINGENCY (0%)									$0
ESCALATION (0%)									$0
SUBTOTAL									$1,876,603
CONTRACTOR'S OVERHEAD/PROFIT (6%)									$112,596
TOTAL PROJECT									$1,989,199