# ECONOMIC IMPACT ANALYSIS OF INCLUSIONARY HOUSING PROGRAM IN OAKLAND

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***August 2007***

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# EXECUTIVE SUMMARY

## INTRODUCTION

### Purpose

To assist the City of Oakland in its consideration of an inclusionary housing program, an economic study was undertaken to analyze the impacts of potential inclusionary housing requirements on the feasibility of developing housing in Oakland.

### Evaluation of City's Proposed Ordinance Requirements

The economic analysis tested the impacts of the proposed inclusionary requirements as set forth in the City's draft ordinance of October 2006. Key aspects of those requirements include the following:

- Three options for compliance:
  - On-site: 15% of units affordable.
  - Off-site: 20% of units affordable.
  - In-lieu fee: Equivalent to amount required if City were to subsidize production of off-site affordable units.
- Affordability levels for inclusionary units:
  - For-sale units affordable at an average of 100% Area Median Income (AMI).
  - Rental units affordable at an average of 60% AMI.
  - Affordable sales prices and rents to be determined consistent with California Redevelopment Law.
- Inclusionary units to be at least proportional to market-rate units in terms of number of bedrooms.

### Sensitivity Analysis of Alternative Requirements

Once the economic impacts of inclusionary requirements in the proposed ordinance were evaluated, additional sensitivity analysis was done to test the impacts of alternative ordinance parameters, focusing on differences in the percentages of inclusionary units required, and differences in the affordable sales prices for the inclusionary units.

### Approach for the Analysis

The first step in the analysis was to assemble current data and information on prototypical development projects that cover the range of types of market-rate housing projects being

developed throughout Oakland. Pro forma financial analysis summaries were then prepared for the development prototypes to understand the economics of feasible development. Separately, the costs of potential inclusionary requirements were estimated for each of the compliance options: on-site units, off-site development, or in-lieu fee payment. With these inputs, the costs of inclusionary requirements were added to the housing prototype pro formas to assess potential impacts on project feasibility and to consider possible implications for residential development in Oakland if the inclusionary requirements were adopted.

## OAKLAND HOUSING DEVELOPMENT PROTOTYPES

Seven market-rate housing development prototypes were identified for use in the analysis. The prototypes were chosen to be representative of the range of types of housing development occurring in Oakland. They also were chosen to represent developments with different costs and revenues. In this way, it is possible to demonstrate how the economics of development vary among prototypes in order to test the possible market effects of inclusionary requirements throughout the city.

The seven housing development prototypes are defined based on a combination of factors that determine the costs and revenues of development:

- *Building types and densities*: including wood-frame, and concrete and steel construction, from low-rise townhomes/lofts/row houses, to lower-rise and mid-rise condos, to higher-rise development.

- *Locations within the city serving different markets*: including locations in the neighborhoods of North Oakland, West Oakland, and East Oakland, locations along the Estuary waterfront, and locations in downtown Oakland.

The prototypes are all for-sale developments, as new market-rate housing occurring in Oakland has been for-sale housing. Consultations with developers and feasibility testing undertaken as a part of this effort, indicated that rental housing is generally not feasible to develop under current market conditions. The few market-rate rental projects that have been proposed or developed recently, are rented on an interim basis and then sold as condominiums.

Certain housing types were not included as prototypes for this analysis. They include: single family detached homes (typically developed on individual lots or in small projects not covered by inclusionary requirements); conversions of non-residential buildings to residential use (costs are specific to individual projects and not easily generalized); and luxury, high-rise development in tall towers (only limited examples in Oakland, which tend to be relatively unique and are not generally feasible in most parts of the city).

## BASE CASE FEASIBILITY WITHOUT INCLUSIONARY HOUSING IN OAKLAND

Financial pro formas were developed for the housing prototypes based largely on data and information for actual Oakland projects. The objective was to develop an understanding of the

economics of housing development by establishing a base case for each prototype, without an inclusionary housing program in Oakland.

## Market Context and Feasibility Thresholds

The pro formas for the prototype projects reflect *costs* for construction and land, as of late 2006/early 2007 when data was collected for the analysis. They also include *revenues* based on housing sales prices estimated for the time when the new units would be completed and ready for sale. Depending on the prototype, the sales prices would apply about one to two years later than the costs. For the analysis, market-rate housing prices assume future prices at levels that have been achieved in Oakland, although prices in late 2006/early 2007 were somewhat below those levels for some prototypes. Generally, prices are anticipated to return to prior levels and then increase again thereafter.

There is uncertainty about housing prices in the near future. The assumptions for this analysis are reasonable, and not particularly optimistic or conservative. They also tend to even out the effects of the recent housing market downturn for purposes of assessing economic impacts. For economic impact analyses, assumptions about market conditions should reflect overall trends, and not be based at either the low point or the high point of market cycles.

The pro formas calculate the return from development and evaluate project feasibility by comparing this return to the minimum return levels or feasibility thresholds typically required by developers for the types of development projects analyzed. The required return measures set firm thresholds for project feasibility, and are used in the development industry by developers, lenders, and investors. The minimum returns identify what must be achieved for developers to earn acceptable compensation for their efforts and risk and for financing and equity investment to be attracted to the project.

## Base Case Feasibility for Development Prototypes

The results of the base case pro forma analyses without an inclusionary housing program in Oakland, show that project feasibility varies among development prototypes throughout the city.

### Most Feasible Projects

*Wood-frame* prototypes in the stronger market areas show returns that are above the minimum feasibility thresholds. These prototypes include the following:

- Prototype B: Low-rise lofts/townhomes in North Oakland/West Oakland, typically in the vicinity of the Oakland/Emeryville/Berkeley borders.

- Prototype D: Mid-rise condos (4-5 floors) in North Oakland and along the eastern parts of the Estuary waterfront.

- Prototype E: Mid-rise condos (4-6 floors) in Downtown Oakland including the Jack London District.

These results are confirmed by recent development activity in these areas and including these product types.

**Marginally Feasible Projects**

*Lower-cost, wood-frame* prototypes that provide lower-priced, often entry-level housing in Oakland neighborhoods show returns at or close to the minimum feasibility thresholds. These prototypes include the following:

- Prototype A: Low-rise townhomes and row houses in East Oakland and West Oakland, including larger projects on former industrial sites and smaller projects on infill locations.

- Prototype C: Lower-rise condos (3 floors)in East Oakland and West Oakland, often along the major streets/corridors.

In general, market-rate development of these prototypes has become feasible only recently in Oakland. Developer interest has not been as strong as for other prototypes, due to lower potentials for return and fewer successful project examples. Although identified for East and West Oakland, Prototype C is also applicable in nearby parts of North Oakland as well.

**Infeasible or Marginally Feasible Projects**

The more costly prototypes with *concrete/steel construction* show returns below the minimum feasibility thresholds. These prototypes include:

- Prototype F: Higher-density, mid-rise condos (6-8 floors) in larger projects in Downtown Oakland.

- Prototype G: High-rise condos (9-16 floors) in Downtown Oakland.

For these prototypes, construction costs are high and have been increasing, while sales prices have not kept pace with costs or have not reached high enough levels in Oakland.

This group includes project types that have been recently built downtown. However, the costs for these recent developments were below current costs as the projects were built under construction contracts signed several years earlier. There also are numerous projects of these prototypes that are approved or proposed in downtown Oakland. The financial analysis suggests that many of those proposals will not be built right away, and that construction is likely to be postponed until housing prices increase.

While the results for Prototypes F and G are generally applicable, some projects of these types in particularly strong locations may command higher sales prices and generate higher returns that could fall within or above feasibility thresholds. Examples include downtown projects with waterfront sites on Lake Merritt or the Estuary and, possibly, particularly strong locations in Chinatown or the Jack London District.

## COSTS OF PROPOSED INCLUSIONARY REQUIREMENTS

The inclusionary housing requirements proposed in the City's draft ordinance of October 2006 were analyzed to estimate the costs of compliance from the perspective of the market-rate projects that would be subject to the requirements. Costs were identified for each of the compliance options: on-site development, off-site development, or payment of an in-lieu fee that reflects the full subsidy required to build the inclusionary units as part of a separate affordable development. The costs of compliance are based on inputs from actual developments in Oakland, State Redevelopment Law definitions for affordable sales prices, and other City of Oakland requirements.

- *Affordable Sales Prices.* Based on the City's proposed ordinance, on average, inclusionary units are to be affordable to households with incomes up to 100% AMI. Consistent with State Redevelopment Law and City of Oakland definitions, the calculations of affordable sales prices are based on 35% of 90% AMI. The State formula includes a number of costs and lending assumptions that are different from what is typically used by the lending industry. Under conventional underwriting standards, households with incomes as low as 70% AMI could be able to purchase units at these affordable prices.

- *On-Site Compliance*. The cost of on-site compliance is represented by the difference between the market-rate sales price and the affordable sales price for inclusionary units required in a residential development. From the perspective of the market-rate project subject to the requirements, the "cost" is the reduction in revenues from selling a unit at the affordable price instead of the market-rate price. It is assumed that the development costs for the affordable units (15 percent of units in the project) would be essentially the same as the costs of developing the market-rate units in the project (85 percent of units).

- *Off-Site Compliance*. To provide inclusionary units off-site, the developer could build the units directly or could contribute funds to another developer who would build the affordable units. The cost of off-site compliance is defined as the difference between affordable sales prices and the development costs of the off-site units. The analysis assumes that the off-site affordable units are constructed without public funds. As calculated, the costs may understate the true costs of off-site compliance, as there could be additional risks and difficulties of developing two projects in the same timeframe, which cannot be easily quantified. In most cases, the development costs of off-site units are less than the costs of on-site units, as it is assumed that developers of relatively more expensive, market-

rate projects could develop affordable units on less valuable sites and with lower construction costs.

- *In-Lieu Fee*. The proposed ordinance provides the option of paying a fee in-lieu of providing units either on-site or off-site. The fee is to cover the costs for a developer, generally a non-profit, to provide the required inclusionary units as part of an affordable housing development. The amount of the in-lieu fee is calculated as the difference between affordable sales prices and development costs to build the affordable units with receipt of City funds (including payment of prevailing wages and meeting other City contracting requirements).

The costs of compliance were estimated for each of the market-rate housing development prototypes. The results show that the costs of compliance would vary among prototypes and among compliance options. In most cases, the costs of compliance through payment of the in-lieu fee or with off-site development would be lower than the costs of compliance on-site.

In general, on-site compliance could reduce sales revenues by an average of $27,000 to $59,000 per unit in the project, depending on the development prototype. By comparison, the in-lieu fee payments range from $25,000 to $40,000 per market-rate unit, and the off-site compliance costs are estimated to range from $23,000 to $29,000 per market-rate unit (without accounting for the additional risks and hassles involved in developing two projects in the same timeframe).

## IMPACTS OF PROPOSED INCLUSIONARY REQUIREMENTS

The costs of proposed inclusionary housing requirements were integrated into the base case housing prototype pro formas to test potential impacts on development feasibility. Analysis was also done to assess effects on residual land values, and to identify how much housing prices would need to increase to offset inclusionary costs. Consideration was then given to overall implications for housing development in Oakland.

### Effects on Housing Project Feasibility

Overall, the impact analysis identifies that the costs of inclusionary requirements in the City's proposed ordinance are high relative to returns from housing development in Oakland. The proposed inclusionary requirements could cause returns from development to fall below feasibility thresholds in almost all cases. The pro forma analyses show that, for the five prototypes that are feasible in the base case, there is only one prototype under one compliance option where development might be marginally feasible. The two prototypes that are already not feasible in the base case, would have returns that fall further below feasibility thresholds with the additional costs of the proposed inclusionary requirements. The proposed requirements are anticipated to have the greatest impact on the feasibility of developing lower-priced housing in the neighborhoods and developing the more costly building prototypes downtown.

Among compliance options, payment of an in-lieu fee or off-site development would have less impact on project feasibility than on-site compliance in most cases. This is consistent with the differences in costs among the compliance options.

## Market Adjustments and Implications for Housing Development

Over time, a combination of market adjustments are likely to be required to offset the costs of the proposed inclusionary housing requirements. Given the magnitude of effects on project feasibility, these adjustments could take time. In the process, there are likely to be implications for housing development in Oakland. The following summarizes anticipated adjustments and their implications.

- If the October 2006 ordinance proposal was implemented immediately, some development may slow or stop until the market adjusts to incorporate the costs of inclusionary requirements. It also could take longer for development not currently feasible to reach minimum feasibility thresholds, with inclusionary requirements.

- Land prices are likely to stabilize initially and then decline over time, as a result of the inclusionary requirements. Changes in land prices could eventually offset some of the additional costs of inclusionary requirements.

  - For the prototypes with stronger financial feasibility in the base case (three of the seven prototypes), a combination of land price adjustments and development returns at minimum threshold levels, could make a difference in project feasibility.

  - Land price adjustments (in combination with development returns at minimum threshold levels) are unlikely to make enough difference where development is marginally feasible or infeasible in the base case (four of the seven prototypes). With the inclusionary requirements, residual land values are very low or negative for these projects.

- Over time, market increases in housing prices may help restore feasibility, depending on broader housing market trends. Price increases would first need to exceed increases in development costs. Then, price increases would likely go to offsetting inclusionary costs before increasing development returns and/or land values.

  - Housing price increases could help in offsetting inclusionary costs. Depending on the prototype, housing price increases of two percent to eight percent above prices assumed for the analysis and above any increases in development costs, could be sufficient to offset compliance costs and restore feasibility for the five prototypes that are feasible to develop in the base case.

  - Given the current market context, it is unlikely that housing prices will increase this much in the short term, suggesting that it could take a number

of years for prices to increase sufficiently to offset the costs of complying with the proposed inclusionary requirements.

- Feasibility is likely to be restored sooner for the wood-frame building types in the strongest market areas, as exemplified by Prototypes B, D, and E.
  - These are the projects with stronger feasibility in the base case. A combination of adjustments in land prices, housing prices, and development return could occur more quickly than for the other prototypes.
- Effects of the inclusionary requirements could encourage wood-frame construction over steel/concrete construction since the requirements would increase the already high costs of developing the larger building types, as exemplified by Prototypes F and G. To some extent, this is already happening in the current market context under the base case.
  - For the higher-cost building types, the housing prices required for a feasible project with an inclusionary program would need to be at levels above those achieved in Oakland thus far, and therefore could take time to achieve. In addition, possible land price adjustments could make relatively small contributions to restoring feasibility for these projects.
- Lower-priced housing projects, as exemplified by Prototypes A and C, could require significant adjustments to offset inclusionary costs.
  - The ability of land price adjustments to offset inclusionary costs is limited. Similarly, lower development return is unlikely to help offset inclusionary costs, since these projects already have returns at or just above the feasibility thresholds in the base case.
  - Higher housing prices may not be obtainable in some of the locations where these projects could be built, unless there is a general increase in housing prices throughout the broader market.

## SENSITIVITY ANALYSIS OF ALTERNATIVE ORDINANCE PARAMETERS

Additional analyses were undertaken to test the impacts of alternative ordinance parameters, focusing on differences in the percentages of inclusionary units required, and differences in the affordable sales prices for the inclusionary units. The alternatives tested assumed lesser requirements that would have lower costs of compliance than the inclusionary requirements in the October 2006 ordinance proposal.

The findings of the sensitivity analyses show that changes in ordinance parameters could make a difference in lessening impacts on housing project feasibility in Oakland. With less stringent requirements resulting in lower costs of compliance, an inclusionary program could be more successful in producing inclusionary housing units sooner and with fewer market impacts.

While each of the several alternatives evaluated has the effect of reducing impacts and the market adjustments needed to offset inclusionary costs, the results are not substantially different from those for the proposed requirements until fairly large changes in requirements are assumed. Housing development throughout Oakland is not so profitable that it can easily absorb the additional costs of an inclusionary housing program. Of the many alternatives tested, the following options achieved financial feasibility for the greatest range of prototypes and compliance options.

- *Lower Percentages of Inclusionary Units Required:*
  *5% On-Site and 10% Off-Site/In-Lieu Fee*

  With these lower requirements, three of the prototypes could be feasible to develop under all three compliance options compared to only one prototype under one compliance option with the proposed ordinance requirements. Returns would still fall below feasibility thresholds for the other four prototypes, including the higher-cost building types and the lower-priced prototypes. As the inclusionary costs would be lower than under the ordinance proposal, fewer market adjustments would be needed to offset inclusionary costs.

  As noted above, and assuming the ordinance parameters from the October 2006 proposal, the costs of compliance for off-site development and payment of an in-lieu fee are lower than the costs for on-site compliance for most prototypes. This could result in few affordable units being incorporated into market-rate projects. The sensitivity testing of alternative percentage requirements identified that as the inclusionary requirements are reduced, the differential between the on-site and off-site/in-lieu fee requirements is also reduced. If the percentage requirements were reduced to 5% on-site and 10% off-site/in-lieu fee, there is a higher probability that developers would choose to build affordable units on-site.

- *Higher Affordable Sales Prices for Inclusionary Units: Up to 120% AMI*

  Affordable sales prices based on a higher nominal target income level of up to 120% AMI (setting prices so that State-defined housing costs equal 35% of 110% AMI), would lower the costs of compliance and reduce impacts compared to the ordinance proposal. Under conventional underwriting standards, housing priced at the alternative sales prices could actually be affordable at incomes as low as 87% AMI. As a result, the City could set the affordable sales prices at a higher level than specified in the proposed ordinance and still maintain affordability to households at incomes at or below 100% AMI.

With the higher affordable sales prices, two to three of the prototypes could be feasible to develop (three reach the feasibility threshold under one compliance option and two do so under two of the options), compared to only one prototype under one option under the ordinance proposal. Returns may still fall below feasibility thresholds for the other development prototypes (four to five prototypes), including the high-cost building types and the lower-priced prototypes. As inclusionary costs would be lower than under the ordinance proposal, fewer market adjustments would be needed to offset inclusionary costs.

Under this alternative, the higher affordable sales prices make the most difference in project feasibility for off-site and in-lieu fee compliance. Higher sales prices alone are not sufficient to make any of the prototypes feasible with on-site compliance.

- *Combination of Lower Percentage Requirements and Higher Affordable Sales Prices:*
  - *5% On-Site and 10% Off-Site/In-Lieu Fee*
  - *Housing Priced at 120% AMI*

The feasibility testing of this combined alternative shows at least one feasible compliance option for four of the housing prototypes, including Prototypes A, B, D, and E. The results for a fifth prototype, Prototype C, are just below the feasibility threshold. The results for Prototypes F and G are still below feasibility thresholds, since they are already not feasible in the base case.

Among all of the alternatives tested, this combined option could be the most successful in producing inclusionary housing units sooner because the required adjustments to development return and/or land prices would be relatively smaller and more easily absorbed.

## Comments Regarding Possible Phasing-In of Inclusionary Program

If an ordinance were to include requirements at the mid-level or higher end of the range of costs for an inclusionary program, "phasing in" such a program over time could help accommodate the necessary market adjustments. "Phasing-in" could include implementation of lower-cost requirements for a period of time followed by the more costly requirements at a later time. The effect of "phasing-in" inclusionary requirements would be to allow more time for market adjustments. It also could allow time for overall market conditions to improve.

The benefits of this approach, however, would depend on trends in the broader housing market context during the phasing-in period. Improving market conditions for new housing development would help accommodate the costs of inclusionary requirements, while stable or declining conditions would not.

The phasing-in of an inclusionary housing program may not in itself eliminate or substantially reduce impacts, particularly for the higher cost alternatives. However, the benefits of phasing-in inclusionary requirements would allow more time for market adjustments to occur and would give the market an early signal regarding future compliance costs, which could be especially important when developers are negotiating land purchase prices.

# I. INTRODUCTION

## PURPOSE AND SCOPE

To assist the City of Oakland in its consideration of an inclusionary housing program, an economic study was undertaken to analyze the impacts of potential inclusionary housing requirements on the feasibility of developing housing in Oakland.

### Evaluation of City's Proposed Ordinance Requirements

The economic analysis tested the impacts of the proposed inclusionary requirements as set forth in the City's draft ordinance of October 2006. Key aspects of those requirements include the following:

- Three options for compliance:
  - On-site: 15% of units affordable.
  - Off-site: 20% of units affordable.
  - In-lieu fee: Equivalent to amount required if City were to subsidize production of off-site affordable units.
- Affordability levels for inclusionary units:
  - For-sale units affordable at an average of 100% Area Median Income (AMI).
  - Rental units affordable at an average of 60% AMI.
  - Affordable sales prices and rents determined consistent with California Redevelopment Law.
- Inclusionary units to be at least proportional to market-rate units in terms of number of bedrooms.

### Sensitivity Analysis of Alternative Requirements

Once the economic impacts of inclusionary requirements in the proposed ordinance were evaluated, additional sensitivity analysis was done to test the impacts of alternative ordinance parameters, focusing on differences in the percentages of inclusionary units required, and differences in the affordable sales prices for the inclusionary units.

## APPROACH AND METHODOLOGY

The first step in the analysis was to assemble current data and information on prototypical development projects that cover the range of types of market-rate housing projects being developed throughout Oakland. Pro forma financial analysis summaries were then prepared for the development prototypes to understand the economics of feasible development. Separately,

the costs of potential inclusionary requirements were estimated for each of the compliance options: on-site units, off-site development, or in-lieu fee payment. With these inputs, the costs of inclusionary requirements were added to the housing prototype pro formas to assess potential impacts on project feasibility and to consider possible implications for residential development in Oakland if the inclusionary requirements were adopted.

The approach and methodology are summarized by the following steps.

1. *Representative Housing Development Prototypes*

   Identify project prototypes that represent a broad range of types of housing being developed in Oakland. The prototypes covered housing projects being developed throughout the different parts of the City.

2. *Base Case Feasibility Without Inclusionary Housing*

   Develop summary pro formas of the costs and revenues for developing each prototype, so as to understand the economics of current project feasibility. The pro formas were based on inputs from actual Oakland development projects.

3. *Costs of Proposed Inclusionary Requirements*

   Identify the costs of inclusionary housing requirements proposed in the City's draft ordinance of October 2006 from the perspective of the market-rate projects that would be subject to the requirements. Identify costs for each of the compliance options: on-site units, off-site development, and in-lieu fee payment. Costs were based on inputs from actual developments in Oakland, State Redevelopment Law definitions for affordable sales prices, and other City of Oakland requirements.

4. *Impacts of Inclusionary Requirements and Implications for Housing Development*

   Integrate the costs of proposed inclusionary requirements into the housing prototype pro formas to test potential impacts on development feasibility, to assess effects on residual land values, and to identify how much housing prices would need to increase to offset inclusionary costs. Combining the results of these analyses, identify overall implications for market-rate housing development in Oakland.

5. *Testing Alternative Ordinance Parameters*

   Perform additional sensitivity analysis to test the impacts of alternative ordinance parameters, focusing on differences in the percentage of inclusionary units required, and differences in the affordable sales prices for the inclusionary units. Consideration was also given to possible "phasing-in" of an inclusionary housing program over time.

**Hausrath Economics Group (HEG)**, urban and real estate economists, was the prime contractor and lead consultant for this project. HEG analyzed the financial feasibility of market-rate housing development in Oakland and assessed the economic impacts of potential inclusionary housing requirements. Drawing from their background in inclusionary zoning and affordable housing, **Vernazza Wolfe Associates, Inc. (VWA)** identified the costs of potential inclusionary requirements and contributed to the impact analysis.

## ORGANIZATION OF THIS REPORT

This report summarizes the results and findings of the economic analysis. It is organized according to the steps above, with a chapter devoted to the work under each step. The text summarizes the methodology, key assumptions, and results of the analyses, and highlights overall findings. Summary tables are presented in the chapters along with references to more detailed analysis tables and documentation that are included in the technical appendices.

# II. OAKLAND HOUSING DEVELOPMENT PROTOTYPES

Seven market-rate housing development prototypes were identified for use in the analysis. The prototypes were chosen to be representative of the range of types of housing development recently built, under construction, or planned in Oakland. They also were chosen to represent developments with different costs and revenues. In this way, it is possible to understand how the economics of development vary among prototypes and to test the possible effects of inclusionary requirements throughout the city.

## PROTOTYPES DEFINED BY BUILDING TYPE, DENSITY, AND LOCATION WITHIN OAKLAND

The seven housing development prototypes are identified in Table 1. They are defined based on a combination of factors that determine the costs and revenues of development:

- *Building types and densities*: including wood-frame, and concrete and steel construction, from low-rise townhomes/lofts/row houses to lower-rise and mid-rise condos, to higher-rise development.

- *Locations within the city serving different markets*: including locations in the neighborhoods of North Oakland, West Oakland, and East Oakland, locations along the Estuary waterfront, and locations in Downtown Oakland.

Each prototype is a composite model derived from analysis of actual projects of similar type and location. Specific assumptions affecting the costs of development are identified for the prototypes, describing building construction type, building height and number of floors, parking type (surface, garage, or structured; above- or below-grade), unit sizes and unit mix configurations, and overall project density. Revenues are specific to locations within the city and the housing submarkets being served by the types of housing being built there. Thus, the prototypes are associated with building types and locations within Oakland, as described in Table 1.

## PROTOTYPES REPRESENTATIVE OF RECENT DEVELOPMENTS AND PIPELINE PROJECTS IN OAKLAND

The seven prototypes are representative of the majority of residential development projects in Oakland. They were identified based on review of recent housing developments in Oakland (completed projects and projects currently under construction) and review of proposed projects in various stages of the planning and approval process. Input also was received from Oakland developers and City staff.

**TABLE 1**
**OAKLAND HOUSING DEVELOPMENT PROTOTYPES**

| | **Prototype A**<br>**Low-rise Townhomes/**<br>**Row Houses**<br>**East Oakland / West Oakland** | **Prototype B**<br>**Low-rise Lofts/Townhomes**<br>**North Oakland / West Oakland** | **Prototype C**<br>**Lower-rise Condos**<br>**East Oakland / West Oakland** | **Prototype D**<br>**Lower/Mid-rise Condos**<br>**North Oakland / East Estuary** |
|---|---|---|---|---|
| Construction Type | wood | wood | wood frame on concrete podium | wood frame on concrete podium |
| Height | 3 floors including garage | 3 floors including garage | 3 flrs over 1 pkg on some/all site | 4-5 floors over 1 level parking |
| Parking Location | garages in units | indiv. garages/surface pkg. | podium/surface; above grade | podium; above grade |
| Average Unit Size | 1,300 sf | 1,450 sf | 1,080 sf | 1,125 sf |
| Bedroom Mix | 65% 2BR; 35% 3BR | 50% 2BR; 50% 2+/3BR | 32% 1BR; 32% 2BR; 36% 3BR | 5% ST; 35% 1BR; 50% 2BR; 10% 3BR |
| Density | 30-35 units/acre | 30-35 units/acre | 50-60 units/acre | 80-100 units/acre |
| Locations in City | East Oakland / West Oakland | North Oakland / West Oakland<br>(near Oak/Emery/Berk borders) | East Oakland / West Oakland | North Oakland / East Estuary |

| | **Prototype E**<br>**Mid-rise Condos**<br>**Downtown** | **Prototype F**<br>**Mid-rise Condos**<br>**Downtown** | **Prototype G**<br>**High-rise Condos**<br>**Downtown** |
|---|---|---|---|
| Construction Type | wood frame on concrete podium | steel/concrete | steel/concrete |
| Height | 4-6 floors over parking | 6-8 floors over parking | 9-16 floors over parking |
| Parking Location | podium; above grade | largely above grade | above/below grade |
| Average Unit Size | 900 sf | 1,000 sf | 975 sf |
| Bedroom Mix | 30% 1BR; 60% 2BR; 10% 3BR | 40% 1BR; 55% 2BR; 5% 3BR | 10%ST/45%1BR/35%2BR/10%3BR |
| Density | 100-140 units/acre | 140-167 units/acre | 200-300 units/acre |
| Locations in City | Downtown / Jack London | Downtown / Jack London | Downtown / Jack London |

Source: Hausrath Economics Group, based on housing developments occuring in Oakland.

As there are differences in project sizes, the larger building prototypes represent larger numbers of housing units being built in Oakland, particularly Prototypes E, F, and G that include mid-rise and high-rise projects in the downtown area. Though densities are lower, Prototypes A and B (low-rise townhomes, lofts, and row housing) also include some larger projects being built on formerly industrial sites that include larger numbers of units. These two prototypes also include smaller projects on infill locations. Prototype C (lower-rise condos), is likely to occur along major streets/corridors and in smaller to medium-sized projects. Prototype D (lower- and mid-rise condos) typically includes smaller to mid-size projects on infill sites.

An effort was made to identify a workable number of representative prototypes so as not to over-complicate the analysis. In some cases, there are projects that fall between the prototypes. These can be generally understood based on the feasibility assessment and impact analyses of the prototypes to which they are most similar. As relevant, the report comments on implications for other projects.

There also are housing types that were not included as prototypes for this analysis. They are identified below along with comments as to the reasoning involved.

- *Single family detached homes.* Such developments typically occur on individual infill lots or in small projects, outside developments of 20 or more units as would be covered by inclusionary requirements. Exceptions include larger developments, such as the Oak Knoll development now under review, where the provision of affordable housing is often addressed as part of project planning and in overall development agreements.

- *Conversions.* It is difficult to generalize about the costs of converting existing, non-residential buildings to housing. Typically, the costs are specific to individual projects and building conditions, and are not easily generalized.

- *Luxury, high-rise development in tall towers.* There are a few such projects proposed, but only limited examples of actual construction of this type in Oakland. Consultations with developers indicate that such projects tend to be relatively unique, and are not generally feasible to develop in most parts of Oakland.

## FOCUS ON FOR-SALE HOUSING

The prototypes are all for-sale developments, as new market-rate housing occurring in Oakland has been for-sale housing. Consultations with developers indicated that rental housing is generally not feasible to develop under current market conditions, even without an inclusionary requirement. The few market-rate rental projects that have been proposed or developed recently, are rented on an interim basis and then sold as condominiums. As rents are increasing, and there is interest in rental housing, the evaluation of development feasibility included consideration of rental housing development, as discussed in the next chapter. Comments about the implications

of inclusionary housing requirements for rental housing development also are included later in the report.

# III. BASE CASE FEASIBILITY WITHOUT INCLUSIONARY HOUSING PROGRAM IN OAKLAND

Financial pro formas were developed for the housing prototypes based largely on data and information for actual Oakland projects. The objective was to develop an understanding of the economics of housing development by establishing a base case for each prototype, without an inclusionary housing program in Oakland.

The results of the base case pro forma analysis show that housing project feasibility varies among development prototypes throughout the city. Feasibility is strongest for the prototypes with wood-frame construction located in the stronger market areas. The lower-cost, wood-frame prototypes that provide lower-priced housing (often entry-level housing) are marginally feasible currently. Prototypes with more costly steel/concrete construction are currently infeasible or only marginally feasible in most cases, as construction costs are high and have been increasing while sales prices have not kept pace or have not reached high enough levels in Oakland. These findings and the research that was done are explained and summarized in this chapter. The results describe the financial context into which an inclusionary housing program would be introduced.

## APPROACH FOR DEVELOPING FINANCIAL PRO FORMAS

### Pro Formas Generalized From Information for Oakland Projects and Other Sources

Base case pro formas were developed for the housing prototypes based largely on data and information from actual Oakland projects. The approach combined inputs from numerous Oakland projects and other sources to develop generalized pro formas that are consistent in definitions across prototypes. The following list identifies the various information sources for the effort.

- Costs, revenues, and financial pro formas for actual Oakland housing projects. Data and information were made available to HEG for over 15 Oakland projects covering the range of housing prototypes. The data and other inputs were carefully reviewed and updated to current conditions as needed. In addition, HEG spent considerable effort interviewing and consulting with Oakland developers, as part of the development and refinement of the pro formas for the prototypes. Information was provided to HEG on a confidential basis.

- Generalized construction cost estimates for the housing prototypes, prepared by a major construction company with knowledge of and experience building in Oakland. These estimates provided additional input of use in developing the pro formas for the prototypes. The input was provided to HEG on a confidential basis.

- Pro forma analyses from other Bay Area projects and other relevant HEG work.
- Various data/information on housing sales prices and land prices in Oakland, including the Oakland project pro formas.
- Government permits and fees from the pro forma information, generally confirmed by fee schedules and other input from the City of Oakland, the Oakland Unified School District, and the East Bay Municipal Utilities District (EBMUD).
- Pro formas and other data/information from other recent studies of the impacts of inclusionary housing programs.

Information from the above sources, in addition to HEG's many years of experience working with development projects (including 20 years working in Oakland), were combined to prepare the pro forma financial analyses for the prototype projects.

## Market Context for Costs and Revenues

### Current Costs of Development

The pro formas for the prototype projects reflect current costs for construction and land, as of late 2006/early 2007 when the data was collected for the analysis.

### Revenues Based on Housing Prices When Units Completed

Revenues are based on housing sales prices estimated for the time when the new units would be completed and ready for sale. Depending on the prototype, the sales prices would apply about one to two years later than the costs. For the analysis, market-rate housing prices assume future prices at levels that have been achieved in Oakland, although prices in late 2006/early 2007 were somewhat below those levels for some prototypes. Generally, prices are anticipated to return to prior levels within the analysis timeframe, and then increase again thereafter.

There is uncertainty about housing prices in the near future. The assumptions for this analysis are reasonable, and not particularly optimistic or conservative. They also tend to even out the effects of the recent housing market downturn for purposes of assessing economic impacts. For economic impact analyses, assumptions about market conditions should reflect overall trends, and not be based at either the low point or the high point of market cycles.

## BASE CASE PRO FORMAS: ORGANIZATION AND DEFINITIONS

Pro formas for the housing development prototypes are summarized in Table 2. The pro formas are useful for assessing development feasibility in the base case without an inclusionary housing program in Oakland. It is useful to focus on how revenues compare with costs in the base case, as the introduction of inclusionary housing requirements would add to the costs of development.

**TABLE 2**
**RESIDENTIAL DEVELOPMENT PROTOTYPES - BASE CASE PRO FORMAS WITHOUT INCLUSIONARY HOUSING PROGRAM IN OAKLAND**

| | Prototype A<br>Low-rise Townhomes /<br>Row Houses<br>East Oakland / West Oakland | | Prototype B<br>Low-rise Lofts / Townhomes<br>North Oakland / West Oakland | | Prototype C<br>Lower-rise Condos<br>East Oakland / West Oakland | | Prototype D<br>Lower/Mid-rise Condos<br>North Oakland / East Estuary | |
|---|---|---|---|---|---|---|---|---|
| **Development Characteristics** | | | | | | | | |
| Construction Type | wood | | wood | | wood frame on concrete podium | | wood frame over concrete podium | |
| Height | 3 floors including garage | | 3 floors including garage | | 3 flrs over 1 pkg on some/all site | | 4-5 floors over 1 level parking | |
| Parking Location | garages in units | | indiv. garages / surface parking | | podium/surface; above grade | | podium; above grade | |
| Parking Ratio | 2 spaces/du | | 2 spaces/du | | 1 space/du; some buyer-opted lifts | | 1 space/du; some buyer-opted lifts | |
| Average Unit Size | 1,300 sf | | 1,450 sf | | 1,080 sf | | 1,125 sf | |
| Bedroom Mix | 65% 2 BR; 35% 3 BR | | 50% 2 BR; 50% 2+/3 BR | | 32% 1 BR; 32% 2 BR; 36% 3 BR | | 5%ST/35%1BR/50%2BR/10%3BR | |
| Density | 30-35 units/acre | | 30-35 units/acre | | 50-60 units/acre | | 80-100 units/acre | |
| Location in City | East Oakland / West Oakland | | North Oakland / West Oakland<br>(near Oak/Emery/Berk borders) | | East Oakland / West Oakland | | North Oakland / East Estuary | |
| **Development Costs** | Per SF | Per Unit | Per SF | Per Unit | Per SF | Per Unit | Per SF | Per Unit |
| Land /a/ | $34.62 | $45,000 | $40.00 | $58,000 | $25.00 | $27,000 | $44.44 | $50,000 |
| Hard Construction | $200.00 | $260,000 | $210.00 | $304,500 | $200.00 | $216,000 | $250.00 | $281,250 |
| Government Permits and Fees | $10.77 | $14,000 | $10.34 | $15,000 | $12.50 | $13,500 | $12.89 | $14,500 |
| Other Soft Costs | $43.23 | $56,200 | $49.66 | $72,000 | $50.65 | $54,700 | $62.22 | $70,000 |
| Construction Financing | $10.77 | $14,000 | $13.03 | $18,900 | $13.52 | $14,600 | $20.89 | $23,500 |
| **Total Development Costs**<br>(excl. devel. fee & return on capital) | **$299.39** | **$389,200** | **$323.03** | **$468,400** | **$301.67** | **$325,800** | **$390.44** | **$439,250** |
| **Revenue** | | | | | | | | |
| Sales Price (avg.) | $367.69 | $478,000 | $413.79 | $600,000 | $365.74 | $395,000 | $502.22 | $565,000 |
| (Less) Sales Expenses | ($12.85) | ($16,700) | ($14.48) | ($21,000) | ($12.78) | ($13,800) | ($17.56) | ($19,750) |
| **Sales Net of Sales Expenses** | **$354.84** | **$461,300** | **$399.31** | **$579,000** | **$352.96** | **$381,200** | **$484.66** | **$545,250** |
| (Less) Development Costs | ($299.39) | ($389,200) | ($323.03) | ($468,400) | ($301.67) | ($325,800) | ($390.44) | ($439,250) |
| **Net Revenue**<br>(for devel. fee & return on capital) | **$55.45** | **$72,100** | **$76.28** | **$110,600** | **$51.29** | **$55,400** | **$94.22** | **$106,000** |
| **Measures of Return** | | | | | | | | |
| Net Revenue: | | | | | | | | |
| As % of Devel. Costs (ROC) | 18.5% | | 23.6% | | 17.0% | | 24.1% | |
| Required % of Costs (ROC) | 16-18% | | 16-18% | | 16-18% | | 18-20% | |
| As % of Net Sales (ROS) | 15.6% | | 19.1% | | 14.5% | | 19.4% | |
| Required % of Net Sales (ROS) | 13-15% | | 13-15% | | 13-15% | | 14-16% | |
| Construction Period (months) | 10 | | 12 | | 14 | | 18 | |

/a/ Land cost per building square foot.

Source: Hausrath Economics Group

**TABLE 2 (continued)**
**RESIDENTIAL DEVELOPMENT PROTOTYPES - BASE CASE PRO FORMAS WITHOUT INCLUSIONARY HOUSING PROGRAM IN OAKLAND**

| | Prototype E Mid-rise Condos Downtown | | Prototype F Mid-rise Condos Downtown | | Prototype G High-rise Condos Downtown | |
|---|---|---|---|---|---|---|
| **Development Characteristics** | | | | | | |
| Construction Type | wood frame on concrete podium | | steel/concrete | | steel/concrete | |
| Height | 4-6 floors over parking | | 6-8 floors over parking | | 9-16 floors over parking | |
| Parking Location | podium; above grade | | largely above grade | | above/below grade | |
| Parking Ratio | 1 space/du; some buyer-opted lifts | | 1 space/du | | 1 space/du | |
| Average Unit Size | 900 sf | | 1,000 sf | | 975 sf | |
| Bedroom Mix | 30% 1 BR; 60% 2 BR; 10% 3 BR | | 40% 1 BR; 55% 2 BR; 5% 3 BR | | 10% ST/45% 1BR/35% 2BR/10% 3BR | |
| Density | 100-140 units/acre | | 140-167 units/acre | | 200-300 units/acre | |
| Location in City | Downtown / Jack London | | Downtown / Jack London | | Downtown / Jack London | |
| **Development Costs** | Per SF | Per Unit | Per SF | Per Unit | Per SF | Per Unit |
| Land /a/ | $62.22 | $56,000 | $50.00 | $50,000 | $45.13 | $44,000 |
| Hard Construction | $296.00 | $266,400 | $330.00 | $330,000 | $370.00 | $360,750 |
| Government Permits and Fees | $15.56 | $14,000 | $15.00 | $15,000 | $16.41 | $16,000 |
| Other Soft Costs | $75.56 | $68,000 | $70.00 | $70,000 | $76.00 | $74,100 |
| Construction Financing | $25.44 | $22,900 | $30.80 | $30,800 | $36.21 | $35,300 |
| **Total Development Costs** (excl. devel. fee & return on capital) | **$474.78** | **$427,300** | **$495.80** | **$495,800** | **$543.75** | **$530,150** |
| **Revenue** | | | | | | |
| Sales Price (avg.) | $600.00 | $540,000 | $588.00 | $588,000 | $625.64 | $610,000 |
| (Less) Sales Expenses | ($21.00) | ($18,900) | ($20.60) | ($20,600) | ($21.90) | ($21,350) |
| **Sales Net of Sales Expenses** | **$579.00** | **$521,100** | **$567.40** | **$567,400** | **$603.74** | **$588,650** |
| (Less) Development Costs | ($474.78) | ($427,300) | ($495.80) | ($495,800) | ($543.75) | ($530,150) |
| **Net Revenue** (for devel. fee & return on capital) | **$104.22** | **$93,800** | **$71.60** | **$71,600** | **$59.99** | **$58,500** |
| **Measures of Return** | | | | | | |
| Net Revenue: | | | | | | |
| As % of Devel. Costs (ROC) | 22.0% | | 14.4% | | 11.0% | |
| Required % of Costs (ROC) | 18-20% | | 20-22% | | 22-25% | |
| As % of Net Sales (ROS) | 18.0% | | 12.6% | | 9.9% | |
| Required % of Net Sales (ROS) | 14-16% | | 17-19% | | 19-23% | |
| Construction Period (months) | 18 | | 22 | | 24 | |

/a/ Land cost per building square foot.

Source: Hausrath Economics Group

## Project Costs and Revenues

The pro formas in Table 2 identify project costs and revenues. For each housing prototype, development costs and revenues are presented on both a per-unit basis (right column) and a per-square-foot basis[1] (left column). The cost and revenue categories are explained below. Background tables detailing the cost and revenue assumptions are included in Appendix A. The costs and revenues for the prototypes are for residential development and exclude any commercial space/uses that might be included in some projects.

### Development Costs

The five cost categories include the following:

- *Land Cost.* The table shows land costs measured per housing unit and per square foot of building area. Appendix Table A-1 shows land cost per square foot of site area, which was used as the basis for these land cost measures.

- *Hard Construction.* The hard construction costs include costs for building construction, parking, site development, and landscape/hardscape.

- *Government Permits and Fees.* This category includes permits, fees and other charges by the City of Oakland, school fees charged by the Oakland Unified School District (OUSD), and water and sewer connection, installation, and capacity fees and charges by the East Bay Municipal Utilities District (EBMUD).

- *Other Soft Costs.* This category includes a number of items covering architectural/engineering/other consultants and studies, other pre-development costs, legal and accounting, title, taxes, insurance, marketing and models, contingencies, and other miscellaneous costs.

- *Construction Financing.* This cost includes interest and loan fees on construction-period financing. The loan amount is estimated at 75 percent of development costs, which is typical for market-rate development. Construction financing cost does not include any other types of loans (such as mezzanine financing) or "interest" on equity invested.

### Revenues

*Revenues* are shown as the average sales price for each housing prototype, per unit and per square foot. *Sales expenses* include commissions and closing costs (marketing costs are included in soft costs). The pro formas identify *sales revenue net of sales expenses*, or net sales revenue.

[1] Costs expressed as per square foot of building area are based on the square footage contained in the living units themselves. As such, they allocate the costs of common areas proportionately to each unit. In Table 2, costs per unit divided by average unit size yields the costs per square foot (SF).

## Net Revenue/Project Return

*Net Revenue* is calculated as net sales revenue minus total development costs. Net revenue as shown in **bold** for each prototype represents the *Project Return* for the development.

Net Revenue or Project Return includes all project returns including development fees (for risk, entrepreneurial efforts, management and oversight, etc.), profit, and return on capital invested. Net revenue/project return is generally available at the end of the project when the units are sold and development costs have been paid. The project return covers development efforts, risk, and capital investment throughout the development period, that can range from 2 to 2.5 years (for smaller projects of Prototypes A and B) up to 5 to 5.5 years (for larger projects of Prototypes F and G), depending on the development prototype.[2]

## Measures of Return as Feasibility Thresholds

The project pro formas calculate two measures of return from development for each prototype: Return on Cost and Return or Margin on Net Sales. The pro formas also identify the minimum return levels or feasibility thresholds for each of the prototypes analyzed.

*Return on Cost (ROC)* is a measure of the Net Revenue as a percent of Total Development Costs. The ROC percentage covers the entire development period and is *not* a measure of annual return or annual earnings. ROC provides a simplified measure of return that can be calculated across all prototypes.

Return on Cost (ROC) is used to evaluate project feasibility and identify minimum feasibility levels or thresholds for development projects. The minimum required ROC for each prototype is identified on the pro formas in Table 2. The minimum required ROC is what must be achieved for developers to earn acceptable compensation for their efforts and risk and for financing and equity investment to be attracted to the project. The required returns set firm thresholds for project feasibility. Projects would not proceed with returns below the required threshold ranges.

As shown in the pro formas, the minimum ROC required for project feasibility varies among the prototypes, due primarily to the longer time period for development and sales for the taller/larger buildings that must be built in a single phase. The longer time period also incorporates a higher risk factor. Thus, the lower-rise Prototypes A, B, and C, have the lower feasibility thresholds, followed by the mid-rise prototypes, then by the higher-density mid-rise and high-rise prototypes with the highest feasibility thresholds.

The other measure of return provided in the pro formas in Table 2 is *Return or Margin on Net Sales (ROS)*. This is another simple measure that expresses Net Revenue as a percent of Net Sales Revenue (sales revenue net of sales expenses). Like the Return on Cost, ROS is not time-sensitive. It also is used widely in the development industry as a test of feasibility, and also has different minimum thresholds required for the different development prototypes.

[2] The development period includes the timeframe for land acquisition, planning and entitlement, construction, and project sales.

These two measures of return are used in the development industry by developers, lenders, and equity investors. They are used for all types of projects, and apply for the range of housing development prototypes analyzed in this study. These required return measures set firm thresholds for "go or no go" based on project feasibility.

## DEVELOPMENT FEASIBILITY FOR THE BASE CASE

The results of the base case pro forma analyses without an inclusionary housing program in Oakland, show that project feasibility varies among development prototypes throughout the city. The results depend on the relationships between costs and revenues in each case. Overall, development of five of the seven prototypes is shown to be feasible.

### Most Feasible Projects

*Wood-frame* prototypes in the stronger market areas show returns that are above the minimum feasibility thresholds. As shown by the pro formas in Table 2, these prototypes include the following:

- Prototype B: Low-rise lofts/townhomes in North Oakland/West Oakland, typically in the vicinity of the Oakland/Emeryville/Berkeley borders.

- Prototype D: Mid-rise condos (4-5 floors) in North Oakland and along the eastern parts of the Estuary waterfront.

- Prototype E: Mid-rise condos (4-6 floors) in Downtown Oakland including the Jack London District.

These results are confirmed by recent development activity in these areas and including these product types. The findings reflect the fact that sales prices for these product types are highest in the areas of Oakland identified for these prototypes.

### Marginally Feasible Projects

*Lower-cost, wood-frame* prototypes that provide lower-priced, often entry-level housing in Oakland neighborhoods show returns at or close to the minimum feasibility thresholds. These prototypes include the following (see Table 2):

- Prototype A: Low-rise townhomes and row houses, in East Oakland and West Oakland.

- Prototype C: Lower-rise condos in East Oakland and West Oakland, often along the major streets/corridors.

In general, market-rate development of these prototypes has become feasible only recently in Oakland. Developer interest in these prototypes has not been as strong as for other prototypes, due to lower potentials for return and fewer successful project examples. As returns for these prototypes are at or near the minimum feasibility thresholds, there is limited ability to absorb additional costs and maintain project feasibility in these cases.

Prototype A occurs in a wider range of locations and includes both larger projects on former industrial sites (which can create new neighborhood identity because of larger project size) and smaller projects on infill locations. There also are projects that fall in between Prototype A and Prototype B (see above), particularly in West Oakland. Prototype C is more likely to occur on major streets and corridors, such as along MacArthur Boulevard or Martin Luther King Jr. Way. Although identified for East Oakland and West Oakland, Prototype C is also applicable in nearby parts of North Oakland as well.

**Infeasible or Marginally Feasible Projects**

The more costly prototypes with *concrete/steel construction* show returns below the minimum feasibility thresholds in the current, base case. These prototypes include:

- Prototype F: Higher-density, mid-rise condos (6-8 floors) in larger projects in Downtown Oakland.

- Prototype G: High-rise condos (9-16 floors) in Downtown Oakland.

For these prototypes, construction costs are high and have been increasing, while sales prices have not kept pace with costs or have not reached high enough levels in Oakland. With the development costs identified for these prototypes, sales prices would have to be about six percent higher than estimated for Prototype F (mid-rise, 6-8 floors downtown) and about 11 percent higher for Prototype G (high-rise, 9-16 floors downtown) to support returns that meet the minimum feasibility thresholds.

This group includes project types that have been recently built downtown. However, the costs for these recent developments were below current costs as the projects were built under construction contracts signed several years earlier. There also are numerous projects of these prototypes that are approved or proposed in downtown Oakland. The financial analysis suggests that, independent of any inclusionary requirement, many of these proposals will not be built right away, and that construction is likely to be postponed until housing prices increase above the levels assumed for the prototypes in this analysis.[3]

While the results for Prototypes F and G are generally applicable for most developments of these types, there are some exceptions. Projects in particularly strong locations that could command higher sales prices are likely to generate higher returns that could fall within or above feasibility thresholds. Examples include downtown projects with waterfront sites on Lake Merritt or the Estuary and, possibly, particularly strong locations in the Chinatown area or the Jack London

[3] More detail about housing price assumptions for the prototypes is provided in Table A-6 in Appendix A.

District. There also could be projects with somewhat lower construction costs (possibly involving pre-fabricated construction techniques) that could generate higher returns than shown for the pro formas in Table 2.

**General Applicability of Conclusions About Development Feasibility in Oakland**

The cost and revenue assumptions for the housing prototype pro formas are generalized, based on analysis of numerous local development projects and other sources. While it is possible to make somewhat different assumptions about costs and revenues, the same general conclusions or "story" about development feasibility are likely to still apply. The results were reviewed with local developers, and make sense within the context of housing market conditions in Oakland, at the time of the analysis.

**Consideration of Other Housing Types**

As part of understanding the feasibility of developing housing in Oakland, consideration was given to other housing types besides the development prototypes analyzed. These include workforce housing and rental housing, although few such projects are being built in Oakland. Consideration also was given to the applicability of the development prototypes analyzed for housing development in the Eastlake and San Antonio neighborhoods.

**Rental Housing**

Market-rate housing being developed in Oakland has been for-sale housing. Developers identify that rents have not been high enough to cover the costs of developing new rental housing in most cases. Further, even for locations with higher rents, the returns from developing for-sale housing have far exceeded those from rental housing, supporting land values and development returns that discourage rental housing development.

Analysis of a rental housing variant of Prototype E confirmed this assessment. Scenarios assuming the top rents in Oakland for a downtown waterfront location and assuming 10 percent higher rents, showed that this type of rental development is not feasible.[4]

The few market-rate rental projects that have been proposed or developed in Oakland recently have been located where rents are highest, in downtown. The new units have been rented on an interim basis and then sold as condominiums. Rental projects in the pipeline have secured approvals for converting to condominiums, prior to starting construction. There can be tax benefits from renting units for a period of time prior to their sale. There also are institutional requirements that can encourage rental prior to sale in some cases, such as those governing some real estate investment trusts. Although rents are anticipated to increase and the prices of

[4] A scenario that assumed the top rents being obtained for a downtown waterfront location (in the first quarter of 2007) did not generate enough revenue to support a project value that could cover development costs. A scenario with 10 percent higher rents produced a project value that covered costs at a very low capitalization rate (four percent or less depending on other assumptions).

condominiums have leveled off somewhat, the feasibility of developing rental housing is not anticipated to change substantially in the near future.

**Applicability of Development Prototypes in the Eastlake and San Antonio Neighborhoods**

Housing developments in neighborhoods to the east of Lake Merritt, in the Eastlake and San Antonio areas, could represent variants of the prototypes evaluated and presented in Table 2. In terms of building types and densities, housing development in these areas could be similar to the lower/mid-rise Prototype D, and possibly the mid-rise Prototype E, in some locations. Development costs also would be fairly similar to the costs identified for these prototypes in Table 2, except for lower land costs. In terms of markets served and housing sales prices, however, there could be larger differences. Prices for new housing in the Eastlake and San Antonio areas would likely be lower than those identified for Prototype D (for North Oakland/East Estuary) or Prototype E (for downtown). As a result, development of Prototype D in the Eastlake/San Antonio areas would generate lower Net Revenue, with returns closer to the threshold for project feasibility. Development of Prototype E also would generate lower Net Revenue, and may only be feasible in locations closer to Lake Merritt.

Housing development in the Eastlake and San Antonio areas also could include development of building types similar to Prototype C (lower-rise condos in East Oakland). In this case, revenues could be higher than those identified for Prototype C and costs might be a little higher as well. Net Return would likely be higher and above the threshold for a feasible project of Prototype C.

# IV. COSTS OF PROPOSED INCLUSIONARY HOUSING REQUIREMENTS

The purpose of this chapter is to explain how the costs of the inclusionary housing requirements used in the feasibility testing were derived. These compliance costs are defined from the perspective of the market-rate project that would be subject to the requirements.

Costs were identified for each of the compliance options: on-site development, off-site development, or payment of an in-lieu fee that reflects the full subsidy required to build the inclusionary units as part of a separate affordable development. The City's proposed ordinance of October 2006 provided the parameters for defining the inclusionary requirements.

Based on the analysis, the costs of compliance were then estimated for each of the market-rate housing development prototypes (described in Chapters II and III). The results show that the costs of compliance would vary among prototypes and among compliance options. In most cases, the costs of compliance through payment of the in-lieu fee or with off-site development would be lower than the costs of compliance on-site. In the rest of the report, the costs of compliance as defined and estimated in this chapter are used to assess the impacts of inclusionary requirements on the feasibility of developing housing in Oakland.

## AFFORDABLE SALES PRICES

Affordable sales prices for the inclusionary units are critical for feasibility testing of an inclusionary housing ordinance. These prices help define the costs of on-site compliance, off-site compliance, and in-lieu fees.

### Methodology for Sales Price Calculations

The City's proposed ordinance of October 2006 specifies that affordable sales prices for the inclusionary units are based on the following requirements.

- Calculations of affordable sales prices are to be based on the requirement that inclusionary units are affordable to households with incomes up to 100% AMI (Area Median Income).

- Affordable prices are to be defined using the same method that is used for the City of Oakland's affordable homeownership development program. This definition is primarily based on State Redevelopment Law definitions, as well as an additional City requirement. These definitions assume that:

    - To ensure that a range of households can afford to purchase units, the income used for calculating the affordable sales price is 10 percentage points less than the maximum household income used to determine eligibility to purchase the units. For example, if units are targeted to

households making no more than 100 percent of median income, then the income used for the calculations is 90 percent of median income.
  - Monthly housing costs should not exceed 35 percent of the gross household income used to calculate affordable housing cost.
  - The source of household income information is the official state income limits published annually. The most recent income table (for 2007) was published in April 2007.
  - Monthly housing costs include not only mortgage payments (principal and interest), property taxes, and hazard insurance, but also must include allowances for utility costs, mortgage insurance, maintenance costs, and homeowner association dues (HOA). Because these allowances reduce the monthly payment amount available for mortgage payments, they reduce the total mortgage that can be obtained and therefore result in a requirement for lower sales prices.
  - The City's ownership development program has traditionally used an interest rate calculation based on the 30-year fixed rate defined by FNMA's Required Net Yield Rate plus an additional 0.625%.

The consultant and City staff worked together to develop values for the allowances described above that are part of the affordable sales price calculation.

– Affordable sales prices must be based on the number of bedrooms in a housing unit. For each unit size, the state definition uses a presumed household size. Because income limits vary by household size, this results in different prices for units of different sizes. The presumed household sizes used for calculating the prices are as follows:

  - Studio units occupied by one-person households.
  - One-bedroom units occupied by two-person households.
  - Two-bedroom units occupied by three-person households.
  - Three-bedroom units occupied by four-person households.
  - Four-bedroom units occupied by five-person households.

While the 2006 ordinance proposal identifies rental housing as an option for meeting inclusionary requirements, this analysis assumes that the requirements would be satisfied by for-sale housing or payment of an in-lieu fee. The main reason for this focus on for-sale housing is that market-rate rental housing is not generally feasible to develop in Oakland at present (see the discussions in Chapters II and III).

## Calculated Affordable Sales Prices

Table B-1 in Appendix B provides detailed background on how the affordable sales prices are calculated. The resultant affordable sales prices are presented below. (These prices have been rounded.)

- Studio Unit $158,500
- One-bedroom Unit $183,100
- Two-bedroom Unit $209,300
- Three-bedroom Unit $232,700
- Four-bedroom Unit $249,300

These prices represent the maximum prices that could be charged for the affordable units as defined in the proposed inclusionary requirements.

**Minimum Household Income Requirements**

As stated above, the affordable sales prices are based on the City of Oakland's affordable homeownership program requirements. These requirements are not the same as those used by conventional underwriters. For example, conventional underwriting standards do not consider utility costs, maintenance costs, or HOA payments. In addition, actual interest rates are generally below the rate used by the City's formula. Consequently, while the calculated affordable sales prices presented above are pegged to 90% AMI, in reality, conventional underwriting standards would permit households at lower income levels to purchase homes at these affordable sales prices. Calculations based on conventional underwriting standards identify that the affordable sales prices above for studios, one-, two-, and three-bedroom units could be affordable to households with incomes at 70% AMI. Four-bedroom units could be affordable to households with incomes at 69% AMI. These calculations are shown in Table B-2 in Appendix B.

## COST OF ON-SITE COMPLIANCE

The cost of on-site compliance under the proposed inclusionary ordinance is represented by the difference between the sales price for market-rate units and the affordable sales price for the inclusionary units required in a residential development. From the perspective of the market-rate project subject to the requirements, the "cost" is the reduction in revenues from selling a unit at the affordable price instead of the market-rate price. For example, the cost of a one-bedroom affordable unit sold for $183,100 would be $141,900 if the market-rate price for that unit would otherwise be $325,000 (such as for Prototype C). In another, higher-priced development, the cost of an affordable unit sold at $183,100 could be $326,000 if the market-rate price would otherwise be $510,000 (such as for Prototype D).

For on-site compliance, the calculations assume that the development costs for the affordable units (15 percent of units in the project) would be essentially the same as the costs of developing the market-rate units in the project (85 percent of units).[5] Since the affordable sales prices vary by the number of bedrooms, and the market-rate prices vary by project as well as number of bedrooms, the specifics of individual projects would determine the overall cost of on-site

[5] Developers contacted reported that the costs are essentially the same for all units in a project when inclusionary units include a mix of unit sizes located throughout the project. They also reported that the additional costs and hassles of providing different finishes requiring different materials and subcontractors was generally not justified for the relatively small number of affordable units (15 percent).

compliance. The costs of on-site compliance were estimated for the housing development prototypes as summarized in Table 6 later in this chapter.

## COST OF OFF-SITE COMPLIANCE

One of the compliance options under the proposed inclusionary ordinance is for the developer to provide inclusionary units off-site. There are a number of ways this could happen. For example, the developer could build the units directly, or the developer could contribute funds to another developer who would build the affordable units. In calculating the costs of off-site compliance, this analysis assumes that the affordable units are constructed without public funds and thus without any of the contracting and prevailing wage requirements that are often a condition of receiving public funds. The cost of off-site compliance is defined as the difference between affordable sales prices and the development costs of the off-site units.

### Methodology for Off-Site Cost Calculations

The first step was to calculate off-site development costs. Because developers are likely to try to develop off-site units in areas with lower land costs and using lower-cost construction methods than might be used in their market-rate projects, it is assumed that development costs for off-site inclusionary housing would be equivalent to development costs in Oakland's neighborhoods, including North, West, and East Oakland. Specifically, housing Prototypes A, C, and D came closest to approximating the building types that would likely be built off-site.

The development costs per square foot (SF) for Prototypes A and C are approximately $300/SF. The development cost for Prototype D is higher at $390/SF. The average development cost per SF for the three prototypes is $330. Two separate development cost figures per SF were used in estimating the costs of development for off-site compliance. For the larger, more costly Prototypes D, E, F, and G, it was assumed that the off-site units would be a blend of Prototypes A, C, and D, and thus the overall average of $330/SF was used. However, for projects of the type represented by the smaller, less costly Prototypes A, B, and C, it was assumed that off-site projects would not be constructed at a higher cost than the market-rate projects, and thus the analysis assumed a cost of $300/SF.

The next step was to adjust this cost information to include some return for developing the affordable housing. A development fee or development return is not included in the initial estimates of development costs above, since the feasibility pro formas assume that development return is the difference between development revenues (sales prices) and development costs (without return for development fees, risk, profit, and capital invested).

A developer would expect some return for developing the affordable off-site housing, since this would be a separate development project with its own costs and risks. Oakland's NOFA process, as well as other affordable housing programs such as low-income housing tax credits, permit as an allowable cost a fee per unit or a percentage of development costs that can be paid to developers of affordable housing to provide return for the development. For purposes of this analysis, it was assumed that a similar financial return to the developer would be needed to account for risk and lack of return in the development cost figures from the prototypes. An

additional 15 percent was added to the development costs above for use in the calculations of the costs of off-site compliance. Thus, the total development cost per SF used to calculate the impacts of off-site compliance under Prototypes D, E, F, and G was $380/SF, and the off-site development cost per SF for Prototypes A, B, and C was $345/SF.

For off-site compliance, there is a certain amount of risk in developing two projects at the same time (a market-rate project and an affordable project). Since the proposed ordinance stipulates that the inclusionary units need to be developed along with the market-rate housing, the market-rate developer is responsible for insuring that both the affordable and market-rate units are built in the same timeframe. Many issues can surface during the development process that can seriously affect development schedules. These include unforeseen circumstances, such as site problems not initially anticipated and inclement weather, availability of financing, and the length of time required for the permitting process. The 15 percent return included in development costs accounts for some degree of uncertainty and risk. However, there could be additional risks and difficulties of the types just described. As it is difficult to quantify the cost of possible additional risks and hassles, the costs of developing affordable housing off-site as identified above may be underestimated.

In addition to estimating development costs per SF for the off-site units, it was also necessary to estimate the number of square feet in each unit type to compute development costs for each unit size. Based on a review of recent project information provided through the City's NOFA process as well as review of other recent affordable development projects, this analysis derived the following affordable unit sizes which are then used to determine the costs of off-site compliance as well as the in-lieu fees presented in the next section:

- Studio Unit 500 SF
- One-bedroom Unit 700 SF
- Two-bedroom Unit 900 SF
- Three-bedroom Unit 1,200 SF
- Four-bedroom Unit 1,350 SF

Multiplying the number of square feet for each unit size by the development cost per SF (including return/profit) generates the off-site development costs presented below.

**Costs of Off-Site Compliance**

Table B-3 in Appendix B presents detailed tables for calculating the costs of off-site compliance. The costs of compliance are defined as the difference between off-site development costs and affordable sales prices for each unit size by number of bedrooms. A summary of the costs (rounded) for satisfying the off-site inclusionary requirements is presented below in Table 3.

**TABLE 3**
**SUMMARY OF COSTS OF OFF-SITE COMPLIANCE, BY UNIT SIZE**

| | Studio | One Bedroom | Two Bedrooms | Three Bedrooms | Four Bedrooms |
|---|---|---|---|---|---|
| Unit Size | 500 | 700 | 900 | 1,200 | 1,350 |
| *For Prototypes D, E, F, and G – Costs Based on Three Types of Projects (A, C, and D)* | | | | | |
| Off-Site Costs | $31,500 | $82,900 | $132,700 | $223,300 | $263,700 |
| *For Prototypes A, B, and C – Costs Based on Two Types of Projects (A and C)* | | | | | |
| Off-Site Costs | $14,000 | $58,400 | $101,200 | $181,300 | $216,400 |

Source: Vernazza Wolfe Associates, Inc., Hausrath Economics Group, and the City of Oakland.

As shown in Table 3, the off-site compliance costs for Prototypes A, B, and C are lower for each unit size than the costs for the other prototypes.

## IN-LIEU FEE CALCULATION

The proposed inclusionary ordinance provides the option of paying a fee in-lieu of providing units either on-site or off-site. The purpose of the fee is to cover the costs for the City to provide the required affordable housing off-site. Similar to the off-site compliance costs, the in-lieu fee is also defined as the difference between development costs and affordable sales prices for each unit size. The major difference, however, is that compliance costs are based on what it would cost to build an affordable unit if the City were to fund it. In order for affordable housing developers to receive grants and loans from City funding sources, it is necessary to pay prevailing wages and to meet other contracting requirements. These requirements increase overall development costs.[6]

### Methodology for the Fee Calculations

A number of options were considered for the calculation of affordable housing development costs for city-subsidized projects. Initially, it was assumed that this analysis would be based on development cost data provided by developers of proposed affordable housing developments that were competing for housing trust funds through the City's NOFA process. As part of the NOFA application process, comprehensive development cost information is provided to the City.

[6] It is assumed that in-lieu fees would be deposited into the City's housing trust fund and used to subsidize affordable housing developments.

However, a review of this information revealed that there is wide variation in development costs. Some of this variation is due to specific site or project issues which may not apply to other affordable developments. Another explanation for this variation is incomplete or incorrect cost information. City staff and the consultants worked together to see if there were ways to reduce these cost differences, but in the end, a decision was reached to use *adjusted* development cost data from Prototypes C and D (lower-rise and mid-rise condominium projects), since these prototypes characterize the types of affordable ownership projects that are likely to be built in Oakland.

Table 4 shows the adjustments that were made to the market-rate cost information. First, all costs are inflated by 15% to reflect payment of prevailing wages. Next, an average development fee amount of $13,000 was added to the cost per unit. This fee amount is based on the City of Oakland's development fee guidelines for the 2006 NOFA submissions. The per-unit development cost is then divided by the average unit size in square feet for Prototypes C and D. The final step was to average the two adjusted cost measures. In this way, the average cost of $395/SF was derived.

Similar to the calculation of off-site development costs for privately-built projects, the average cost per SF for City-assisted projects presented in Table 4 was then multiplied by the estimated number of square feet for each unit size. This product defines affordable housing development costs for each unit size.

**TABLE 4**
**CALCULATION OF AFFORDABLE HOUSING**
**DEVELOPMENT COSTS FOR CITY-ASSISTED PROJECTS**

| | Prototype C<br>Lower-rise Condos | Prototype D<br>Lower/Mid-rise Condos |
|---|---|---|
| Cost per Unit | $325,800 | $439,250 |
| Add 15% for prevailing wages, etc. | $48,870 | $65,888 |
| Add $13,000 development fee | $13,000 | $13,000 |
| Total Adjusted Costs | $387,670 | $518,138 |
| Cost per SF | $359 | $432 |
| Average Cost per SF | $395 | |

Source: Vernazza Wolfe Associates, Inc. and Hausrath Economics Group.

The difference between development costs and the affordable sales price was then calculated by unit size to determine the affordability gap. This gap analysis defines the maximum in-lieu fee that can be charged per required affordable unit.

## In-Lieu Fee Results

Table 5 below provides a summary of potential in-lieu fees by size of unit. Table B-4 in Appendix B provides more detailed information on the calculation of these fees.

**TABLE 5**
**ESTIMATED IN-LIEU FEES BY SIZE OF UNIT**

| | Studio | One Bedroom | Two Bedrooms | Three Bedrooms | Four Bedrooms |
|---|---|---|---|---|---|
| Unit Size in Square Feet | 500 | 700 | 900 | 1,200 | 1,350 |
| Affordability Gap Rounded as In-Lieu Fee | $39,000 | $93,400 | $146,200 | $241,300 | $283,900 |

Source: Vernazza Wolfe Associates, Inc., Hausrath Economics Group, and the City of Oakland.

## COMPARISON BETWEEN OFF-SITE COMPLIANCE AND IN-LIEU FEE

Since higher development costs per SF are used in the in-lieu fee calculations, the in-lieu fees for each unit size are higher than the off-site compliance costs. The primary reason is that the in-lieu fee incorporates the higher development costs needed to meet City of Oakland requirements such as prevailing wages and other city contracting requirements; whereas the off-site compliance costs are based on the cost of private market development without public assistance.

It should also be noted that the off-site compliance costs may understate the true costs of inclusionary requirements to the developer of the market-rate project. While development costs have been adjusted by 15 percent to include return/profit, this allowance may still not compensate the developer for the additional risks and difficulties of developing two projects at the same time. If it were possible to quantify the costs of these risks, there would likely be a smaller difference in costs between off-site compliance and the in-lieu fee.

## COSTS OF COMPLIANCE FOR HOUSING DEVELOPMENT PROTOTYPES

### Costs Calculated for Prototypes for Each Compliance Option

The costs of the proposed inclusionary requirements as analyzed above were used to estimate the costs of compliance for each of the market-rate housing development prototypes (defined in Chapter II). This process involved four steps:

- Identify the number of affordable units required, in total and by number of bedrooms (inclusionary units are to be at least proportional to market-rate units by number of bedrooms).

- For *on-site* compliance, the cost of compliance is the loss of potential sales revenue because of the restricted sales prices on the affordable units. Thus, we add the sum of the affordable sales prices for the required inclusionary units (15 percent) to the sum of the prices for the market-rate units (85 percent) to calculate revenues for the primary project, and compare this to the revenues if all units were market rate.

- For *off-site* compliance, take the difference between development costs for the off-site unit and the affordable sales price for that unit (as summarized in Table 3) and multiply by the number of required affordable units.

- For compliance based on payment of the *in-lieu fee*, multiply the number of required affordable units by the in-lieu fee amount per unit.

The results identify the costs of inclusionary requirements under each compliance option. These costs were input into the housing prototype pro formas (from Chapter III) for use in assessing feasibility impacts of the proposed requirements, as described in the next chapter.

A summary of the costs of compliance for the development prototypes is presented in Table 6. This table illustrates how much the provision of affordable housing units would add to the average cost of a market-rate unit in the primary project. Background tables for the cost calculations are included in Appendix B (see Tables B-5a through B-5e).

**Costs Vary Among Prototypes**

As shown in Table 6, the costs of compliance vary among prototypes based on several factors.

- The *costs of on-site compliance* are higher when sales prices for the market-rate units are higher. The higher the market-rate prices, the larger the difference between selling units at affordable prices versus selling units at the market-rate prices that would otherwise apply without inclusionary requirements. There are fairly large differences in on-site costs between the higher-priced prototypes, such as Prototypes B, F, and G and the more moderate-priced prototypes, such as Prototypes A and C (see Table 6).

- The *costs of off-site and in-lieu fee compliance* are higher when the primary project includes larger units, and proportionally more units with larger bedroom counts. The in-lieu fee amount or the cost/funding required for off-site development increases as the number of bedrooms increases for the affordable units. In these cases, the compliance costs are lower for the higher-density, mid-rise and high-rise projects, with smaller units, such as Prototypes F and G. Compliance costs are higher for the lower-density projects with larger units, such as Prototypes A and B.

**TABLE 6**
**SUMMARY COMPARISON OF COSTS OF INCLUSIONARY HOUSING COMPLIANCE OPTIONS, BY DEVELOPMENT PROTOTYPE**

**Costs of Affordable Housing per Unit in Primary Project as Reflected in Primary Project Pro Forma**

| Prototype | On-Site Compliance | Off-site Compliance /a/ | In-Lieu Fee Option |
|---|---|---|---|
| A | $37,540 | $26,770 | $37,180 |
| B | $54,750 | $29,390 | $40,310 |
| C | $26,540 | $25,600 | $35,730 |
| D | $52,300 | $25,130 | $27,790 |
| E | $48,430 | $26,720 | $29,470 |
| F | $55,860 | $24,930 | $27,590 |
| G | $59,320 | $23,310 | $25,870 |

/a/ The costs of off-site compliance may be underestimated. There could be additional difficulties and risk associated with developing two projects in the same timeframe, the costs of which cannot be easily quantified.

Source: Hausrath Economics Group; Vernazza Wolfe Associates, Inc.; City of Oakland.

## Costs Vary Among Compliance Options and Suggest Preferences for In-Lieu Fee or Off-Site Compliance in Most Cases

Costs for compliance through payment of the in-lieu fee or with off-site development are significantly lower than the costs of on-site compliance for five of the seven prototypes (Prototypes B, D, E, F, and G). The large differences in costs between *on-site* compliance and the *other options* indicate that developers of these projects would likely select the in-lieu fee or off-site compliance options. Among those two options, many would likely choose payment of the in-lieu fee over off-site compliance because of the additional difficulties and risk associated with building two projects in the same timeframe.

For the two prototypes with more moderate market prices, there is less difference in costs among compliance options. In one case, Prototype A, the costs are relatively similar among options,

with off-site compliance potentially having the lowest cost. For the lower-price Prototype C, on-site compliance could be the least-costly option while the in-lieu fee option could be the most costly.

# V. IMPACTS OF PROPOSED INCUSIONARY REQUIREMENTS AND IMPLICATIONS FOR HOUSING DEVELOPMENT

The costs of proposed inclusionary housing requirements were integrated into the base case housing prototype pro formas to test potential impacts on development feasibility. Analysis was also done to assess effects on residual land values, and to identify how much housing prices would need to increase to offset the cost of meeting the proposed inclusionary requirements. Consideration was then given to overall implications for housing development in Oakland.

Overall, the impact analysis identifies that the costs of inclusionary requirements in the proposed ordinance are high relative to returns from new development in Oakland. The inclusionary requirements from the October 2006 ordinance proposal could cause returns from development to fall below feasibility thresholds in almost all cases. The proposed requirements are anticipated to have the greatest impact on the feasibility of developing lower-priced housing in the neighborhoods and developing the more costly building types downtown. It could take time for market adjustments to incorporate the inclusionary requirements, likely involving lower development returns, declines in land prices, and market increases in housing prices. In the process, some development may slow or stop until the market adjusts to incorporate the costs of inclusionary requirements. It also could take longer for development not currently feasible to reach minimum feasibility thresholds. These findings and the associated impact analyses are explained and summarized in this chapter.

## SCOPE OF THE IMPACT ANALYSIS

The base case financial pro formas developed for the housing prototypes (described in Chapter III) provide the basis for the impact analysis of proposed inclusionary requirements. Impact analysis was undertaken from three perspectives:

- Effects on project feasibility;
- Effects on residual land values; and
- Housing price increases needed to offset inclusionary costs.

Analysis was done from each of these perspectives individually, to provide insight into the types and magnitudes of market adjustments that could be required to incorporate the costs of proposed inclusionary housing requirements. Then, consideration was given to how such effects and market adjustments are likely to occur in combination, and to overall implications for housing development in Oakland.

The results of each of the impact analyses are summarized below, followed by the discussion of overall implications. Throughout this chapter, the inclusionary requirements evaluated are those from the October 2006 ordinance proposal.

## EFFECTS ON HOUSING PROJECT FEASIBILITY

### Costs of Inclusionary Housing Reduce Returns From Development

The costs of the proposed inclusionary housing requirements (from Chapter IV) were incorporated into the pro formas for the Oakland housing prototypes (from Chapter III). All other costs and revenues were assumed to remain the same as in the base case. This approach provides a measure of the significance of inclusionary costs relative to the returns from development of the various housing prototypes. It identifies potential impact on project feasibility, in the absence of other possible market adjustments.

All else remaining the same, the costs of inclusionary requirements would reduce the Net Revenue (sales revenue minus development costs) from development that provides the return for the developer and investors. The results are evaluated to identify whether:

- Return would remain large enough to meet the thresholds for feasibility so that development would still proceed with inclusionary requirements;

- Return would drop below the feasibility thresholds as a result of inclusionary costs, indicating that the project is no longer feasible and that development is unlikely to proceed, without other changes in revenues or costs; or

- With inclusionary costs, return would fall further below feasibility thresholds for projects that are not currently feasible, indicating the need for larger changes in revenues or other costs before development is likely to proceed.

The results of the feasibility testing are summarized in Table 7. The more detailed pro forma tables behind the results are included in Appendix C (see Tables C-1, C-2, and C-3).

### Costs of Proposed Inclusionary Requirements Could Affect Project Feasibility in Most Cases

Costs of the proposed inclusionary requirements could cause returns from development to fall *below* feasibility thresholds in almost all cases. With inclusionary requirements, the results in Table 7 show only one prototype under one compliance option where development might be marginally feasible (Prototype B under off-site compliance). This compares to five prototypes with returns that are at or above the feasibility thresholds in the base case without inclusionary requirements (Prototypes A, B, C, D, and E). The two prototypes that are already not feasible in the base case, would have returns that fall further below feasibility thresholds with the additional costs of the proposed inclusionary requirements. (Note that the numbers shown in **bold** in Table 7 highlight the cases where development return falls at or above the thresholds for feasibility.)

These findings indicate that the costs of the inclusionary requirements in the proposed ordinance are high relative to returns from new housing development in Oakland. The results also show differences in impact among compliance options and among housing development prototypes.

**TABLE 7**

**SUMMARY OF FEASIBILITY TESTING OF**
**POTENTIAL INCLUSIONARY HOUSING REQUIREMENTS IN OAKLAND**
**ASSUMING THE OCTOBER 2006 ORDINANCE PROPOSAL**
**(All else remaining constant)**

| | Development Prototypes | | | | | | |
|---|---|---|---|---|---|---|---|
| | **A**<br>**Low-rise THs/**<br>**Row Houses**<br>**EO/WO** | **B**<br>**Low-rise**<br>**Lofts/THs**<br>**NO/WO** | **C**<br>**Lower-rise**<br>**Condos**<br>**EO/WO** | **D**<br>**Lower/Mid-rise**<br>**Condos (4-5 flrs)**<br>**NO/EST** | **E**<br>**Mid-rise Condos**<br>**(4-6 flrs)**<br>**DT** | **F**<br>**Mid-rise Condos**<br>**(6-8 flrs)**<br>**DT** | **G**<br>**High-rise Condos**<br>**(9-16 flrs)**<br>**DT** |
| ROC Feasibility Threshold<br>(net revenue as % of devel. cost) | 16-18% | 16-18% | 16-18% | 18-20% | 18-20% | 20-22% | 22-25% |
| Base Case ROC | **19%** | **24%** | **17%** | **24%** | **22%** | 14% | 11% |
| ROC with Inclusionary Housing Requirements Met: | | | | | | | |
| -- On-Site (15% req.) | 9% | 12% | 9% | 12% | 11% | 3% | Negative |
| -- Off-Site (20% req.) /a/ | 11% | **16%** | 9% | 17% | 15% | 9% | 6% |
| -- In-Lieu Fee (20% req.) | 8% | 14% | 5% | 17% | 14% | 8% | 6% |

NOTE: Bold indicates return (ROC) at or above threshold for feasibility. Return on cost (ROC) is calculated as net revenue divided by total development costs.
/a/ Costs of off-site compliance may be underestimated so that return (ROC) could be lower than shown here. There could be additional difficulties and risks associated with developing two projects in the same timeframe, the costs of which cannot be easily quantified.

Source: Hausrath Economics Group, with inputs from Vernazza Wolfe Associates, Inc. and City of Oakland.

Payment of an in-lieu fee or off-site compliance would have less impact on project feasibility than on-site compliance in most cases. This is consistent with the differences in costs among the compliance options.

Among development prototypes, proposed inclusionary requirements are anticipated to have the greatest impact on the feasibility of:

- developing lower-priced housing in the neighborhoods (Prototypes C and A); and
- developing the more costly building prototypes, downtown (Prototypes G and F).

The impacts on project feasibility are greater for prototypes where feasibility is marginal and close to or below the feasibility thresholds in the base case.

## POSSIBLE EFFECTS ON LAND VALUES AND LAND PRICES

Economists calculate residual land value as the income that can be earned from use of land, after all other development costs are covered (including developer/investor return). From this perspective, additional costs for inclusionary requirements would reduce residual land value, assuming all other costs and revenues remain unchanged. While land prices may adjust over time to reflect these lower land values, the question remains whether land price adjustments could be large enough to offset the costs of inclusionary requirements and restore project feasibility.[7]

To address this question and test the effects of proposed inclusionary requirements on residential land values, the base case pro forma analysis for the housing prototypes (from Chapter III) was adapted to calculate residual land value. Land cost was removed from the list of development costs (in the top part of the pro formas) and the minimum required development return (for the developer and investors) was included as a cost item (instead of being calculated as the result of revenues minus costs). Development return as a cost item was based on the mid-point return for the feasibility thresholds identified for each prototype.[8] With these adjustments, the revised pro formas were used to calculate residual land value as the result of revenues minus costs (including

[7] The analysis summarized in this section focuses on the effects of inclusionary housing requirements on the *value of land* to be developed for housing, assuming the prototype developments. Whether and when lower land values (because of additional inclusionary housing costs) could become lower *land prices* in the marketplace depends on other factors as well. Land prices typically reflect the highest value from among land values for alternative uses for a particular site. Thus, as land values drop for housing development, land prices are unlikely to drop below values for alternative uses (such as office development for some downtown sites). Land prices can also include speculative value, particularly for desirable locations and locations in limited supply. Speculative value could limit the decline in land prices, even as residual land values decline by larger amounts. Land prices also can reflect sellers' objectives, and knowledge about real estate market factors and trends. It can take time for prices to adjust to lower land values, when there are sellers willing to hold out for higher prices or with expectations for prices based on sales that occurred before inclusionary requirements were adopted.

[8] Return was estimated based on the mid-point of the range for required ROC ratios that define the feasibility thresholds for the prototypes (see Table 2 in Chapter III). For example, the feasibility threshold for Prototype A requires Return on Cost (ROC) in the range of 16 percent to 18 percent. For the land residual analysis, the pro forma assumes that a return equivalent to 17 percent ROC is required.

return for development and excluding land costs). Under this approach, development return is limited to the feasibility threshold levels, and any return above that level goes to "residual land value". The land residual identifies the amount that a developer could pay for land, and still maintain a feasible project at the minimum level of return.

Land residuals calculated for the housing development prototypes and including the costs of the proposed inclusionary housing requirements are summarized in Table 8. The pro forma tables for these cases are included in Appendix C (see Tables C-4, C-5, and C-6). In Table 8, the residual land values can be compared to land costs in the base case (land costs at the time of the analysis in late 2006/early 2007). Land residuals that are in the range of recent land costs indicate situations where limited land price adjustments could potentially offset the costs of the proposed inclusionary requirements so as to maintain project feasibility provided that developers are willing to accept returns at the threshold levels. Land residuals that are substantially below land costs or are negative indicate that lower land prices are unlikely to make enough difference to restore project feasibility, even when development returns are limited to the threshold levels.

**Land Price Adjustments Could Make a Difference for**
**Prototypes With Stronger Feasibility in the Base Case**

Review of the results in Table 8 indicates that some land price adjustments could potentially make a difference and help to maintain feasibility for Prototypes B, D, and E, assuming that developers are willing to accept returns at or near the threshold levels. These are the prototypes with stronger feasibility in the base case. In these cases, land prices that stabilized at recent levels or declined somewhat (depending on the compliance option) could contribute to the market adjustments needed to accommodate the additional costs of inclusionary requirements. With that outcome, the costs of inclusionary requirements could be offset by a combination of lower land prices and lower return from development, compared to the outcomes without inclusionary housing requirements.

**Land Price Adjustments Are Unlikely to Make**
**Enough Difference Where Development is**
**Marginally Feasible or Infeasible in the Base Case**

Lower land prices are unlikely to compensate for the costs of the proposed inclusionary requirements for four of the seven prototypes, including Prototypes A, C, F, and G (see Table 8). These are the prototypes that are only marginally feasible or are currently infeasible in the base case. For three of these cases (Prototypes C, F, and G), land residuals come out very low or negative, even assuming only the minimum required return to developers, indicating that projects would not be feasible even if land were available at little or no cost.

In many cases, actual land prices are unlikely to decline to the low levels identified by the land residuals in Table 8. Depending on the market context, landowners would likely choose the next highest value land use whenever possible, rather than accept a very low land price for certain types of housing development. In the downtown area, for example, that could mean focusing on mid-rise, wood-frame residential development or commercial development (such as office

**TABLE 8**

**SUMMARY OF EFFECTS ON LAND VALUES OF**
**POTENTIAL INCLUSIONARY HOUSING REQUIREMENTS IN OAKLAND**
**ASSUMING THE OCTOBER 2006 ORDINANCE PROPOSAL**
**(All else remaining constant)**

| | Development Prototypes | | | | | | |
|---|---|---|---|---|---|---|---|
| | **A**<br>**Low-rise THs/ Row Houses**<br>**EO/WO** | **B**<br>**Low-rise Lofts/THs**<br>**NO/WO** | **C**<br>**Lower-rise Condos**<br>**EO/WO** | **D**<br>**Lower/Mid-rise Condos (4-5 flrs)**<br>**NO/EST** | **E**<br>**Mid-rise Condos (4-6 flrs)**<br>**DT** | **F**<br>**Mid-rise Condos (6-8 flrs)**<br>**DT** | **G**<br>**High-rise Condos (9-16 flrs)**<br>**DT** |
| Land Cost Assumed in Base Case, per SF Site | $31-36 | $40-47 | $31-37 | $91-115 | $129-180 | $160-192 | $202-303 |
| Residual Land Value with Inclusionary Housing Requirements Met and With Project Return at Feasibility Threshold: | | | | | | | |
| -- On-Site (15% req.) | $15-18 | $31-36 | $7-9 | $57-72 | $75-105 | Negative | Negative |
| -- Off-Site (20% req.) /a/ | $19-23 | **$44-52** | $3-4 | **$96-120** | $111-156 | $5-6 | Negative |
| -- In-Lieu Fee (20% req.) | $11-13 | $36-42 | Negative | **$91-113** | $104-146 | Negative | Negative |

NOTE: Land residual estimates assume return from development (ROC) at the mid-point of the minimum feasbility thresholds identified for each prototype.
Bold indicates land residual at or above land costs in base case.
/a/ Costs of off-site compliance may be underestimated so that residual land values could be lower than shown here.

Source: Hausrath Economics Group, with inputs from Vernazza Wolfe Associates, Inc. and City of Oakland.

development), when they support higher land prices than higher-rise housing development of Prototypes F and G. In cases where alternative development potentials are limited, land owners might simply hold their property off the market until market conditions improved and land prices became more acceptable.

## CONSIDERATION OF EFFECT OF HOUSING PRICE INCREASES OVER TIME

It is sometimes suggested that inclusionary housing requirements would cause housing prices to rise. However, housing prices are generally set at the maximum that buyers are willing to pay. An increase in costs, regardless of the reason, would not automatically translate into a willingness of buyers to pay more for housing. It is more accurate to say that when housing costs increase, developers would either take lower returns or delay development until market prices have risen to a level that would offset the costs of the inclusionary requirements.

Accordingly, a third analysis was done to consider how much market-rate housing prices would have to increase in order to offset the costs of inclusionary housing requirements. In a strong housing market context with increasing housing prices, it could be possible to offset some or all of the costs of inclusionary requirements in a relatively short period of time, particularly where the needed price increases represent a relatively small percentage change over current prices. In a weaker housing market context, however, and particularly where needed price increases represent a relatively large percentage change, it would be less likely that housing price increases could help offset inclusionary costs within a reasonable timeframe.

For this analysis, it is important to understand that housing prices are determined by the *market* and reflect a number of local and regional factors and trends, particularly the state of the regional economy and its effect on employment and income levels. The perspective of the analysis is on identifying the magnitude of housing price increases that could offset inclusionary housing costs, and then considering the likelihood that such increases could occur within a reasonable timeframe, as a function of the broader housing market context.

To offset the costs of inclusionary requirements, housing price increases must be “real”. In other words, there must be price increases over and above increases in development costs. This is particularly important, as construction costs continue to increase over time. For example, if development costs increased at three percent per year or a little over six percent for two years, increases in housing prices of three percent to five percent over and above costs would require total price increases of nine percent to 11 percent over a two-year period.

The results in Table 9 identify the “real” housing price increases (over and above increases in development costs) that would be needed to offset the costs of the proposed inclusionary requirements from the October 2006 ordinance. In each case, the average housing price required for minimum feasibility with inclusionary requirements is identified (per unit and per square foot) and then compared to the housing price assumed in the base case to identify the percentage increase in price that would be required over the base case assumption.

**TABLE 9**
**"REAL" HOUSING PRICE INCREASES THAT COULD OFFSET COSTS OF INCLUSIONARY REQUIREMENTS ASSUMING THE OCTOBER 2006 ORDINANCE PROPOSAL**
**(All else remaining constant)**

| | Development Prototypes | | | | | | |
|---|---|---|---|---|---|---|---|
| | **A** Low-rise THs/ Row Houses EO/WO | **B** Low-rise Lofts/THs NO/WO | **C** Lower-rise Condos EO/WO | **D** Lower/Mid-rise Condos (4-5 flrs) NO/EST | **E** Mid-rise Condos (4-6 flrs) DT | **F** Mid-rise Condos (6-8 flrs) DT | **G** High-rise Condos (9-16 flrs) DT |
| **Base Case - No Inclusionary Requirements** | | | | | | | |
| Housing Prices Assumed (avg.) | $478,000 | $600,000 | $395,000 | $565,000 | $540,000 | $588,000 | $610,000 |
| Per SF Unit | $368 | $414 | $366 | $502 | $600 | $588 | $626 |
| Feasible Project? | yes | yes | yes | yes | yes | no | no |
| Prices Required for Minimum Feasibility | - | - | - | - | - | $622,000 | $679,000 |
| Per SF Unit | | | | | | $622 | $696 |
| Percentage Increase | | | | | | +6% | +11% |
| **With Inclusionary Requirements per October 2006 Proposed Ordinance** | | | | | | | |
| **On-Site Compliance (15% Req.)** | | | | | | | |
| Housing Prices Required for Minimum Feasibility | $517,000 | $629,000 | $428,000 | $601,000 | $584,000 | $696,000 | $763,000 |
| Per SF Unit | $398 | $434 | $396 | $534 | $649 | $696 | $783 |
| Percentage Increase | +8% | +5% | +8% | +6% | +8% | +18% | +25% |
| **Off-Site Compliance (20% Req.)** | | | | | | | |
| Housing Prices Required for Minimum Feasibility | $504,000 | $604,000 | $426,000 | $573,000 | $560,000 | $653,000 | $708,000 |
| Per SF Unit | $388 | $417 | $395 | $509 | $622 | $653 | $726 |
| Percentage Increase | +6% | +1% | +8% | +1% | +4% | +11% | +16% |
| **In-Lieu Fee (20% Req.)** | | | | | | | |
| Housing Prices Required for Minimum Feasibility | $517,000 | $617,000 | $439,000 | $576,000 | $564,000 | $657,000 | $712,000 |
| Per SF Unit | $398 | $426 | $406 | $512 | $627 | $657 | $730 |
| Percentage Increase | +8% | +3% | +11% | +2% | +4% | +12% | +17% |

NOTE: Housing prices increases shown are "real" increases over and above increases in development costs.

Source: Hausrath Economics Group, with inputs from Vernazza Wolfe Associates, Inc. and City of Oakland.

Table 9 also identifies that the base case analysis, without inclusionary housing requirements, indicates that housing prices are below the levels required for the high-cost building types (steel/concrete construction) under Prototypes F and G. For these development prototypes, higher prices are required to meet minimum feasibility thresholds for project feasibility, even without inclusionary requirements.

**Housing Price Increases Could Help in Offsetting Inclusionary Costs. Such Increases Alone Are Unlikely to Be Large Enough to Restore Feasibility in Many Cases**

The magnitudes of "real" housing price increases that could offset the costs of inclusionary requirements in the October 2006 ordinance proposal range overall, from lows of one percent to six percent higher prices up to highs of 17 percent to 25 percent higher prices, depending on the development prototype and the compliance option (as summarized in Table 9).

- For the higher-cost building types where development is already economically infeasible, the prices required for a feasible project with an inclusionary program are at levels above those that have been achieved in Oakland thus far (from $650 per SF to $780 per SF for steel/concrete construction under Prototypes F and G).

- For development prototypes that provide lower-priced, entry-level market-rate housing, relatively large increases in prices could be required (price increases of six percent to 11 percent for Prototypes A and C). By definition, demand for these types of housing is very sensitive to housing prices.

- Price increases could make more difference in offsetting inclusionary housing costs under Prototypes B, D, and E, as these require relatively smaller price increases, of from one percent to eight percent. These are the prototypes with stronger feasibility in the base case.

Overall, housing price increases over time could offset some of the costs of inclusionary requirements. However, actual price increases would probably not be large enough to fully offset inclusionary costs and restore feasibility in many cases, at least for a while into the future. The results in Table 9 identify the need for relatively large housing price increases in many cases.

## SUMMARY OF LIKELY EFFECTS AND IMPLICATIONS FOR HOUSING DEVELOPMENT

Taken together, the analyses summarized above indicate that the costs of inclusionary requirements as proposed in the October 2006 ordinance are high relative to returns from new development in Oakland. Development is not so profitable that it can readily absorb the additional costs for inclusionary housing. Thus, a combination of market adjustments are likely to be required to offset the costs of the proposed inclusionary housing requirements. These adjustments could take time. In the process, there are likely to be implications for housing

development in Oakland. The following summarizes anticipated adjustments and their implications.

- If the October 2006 ordinance proposal was implemented immediately, some development may slow or stop until the market adjusts to incorporate the costs of inclusionary requirements. It also would take longer for development not currently feasible to reach minimum feasibility thresholds, with inclusionary requirements.

- Land prices are likely to stabilize initially and then may decline over time, as a result of the inclusionary requirements. Changes in land prices could eventually offset some of the additional costs of inclusionary requirements.

  - For the prototypes with stronger financial feasibility in the base case (three of the seven prototypes), a combination of land price adjustments and development returns at minimum threshold levels, could make a difference in project feasibility.

  - Land price adjustments (in combination with development returns at minimum threshold levels) are unlikely to make enough difference where development is marginally feasible or infeasible in the base case (four of the seven prototypes). With the inclusionary requirements, residual land values are very low or negative for these projects.

- Over time, market increases in housing prices may help restore feasibility, depending on broader housing market trends. Price increases would first need to exceed increases in development costs. At that point, price increases would likely go to offsetting inclusionary costs before increasing development returns and/or land values.

  - Housing price increases could help in offsetting inclusionary costs. Depending on the prototype, housing price increases of two percent to eight percent above prices assumed for the analysis and above any increases in development costs, could be sufficient to offset compliance costs and restore feasibility for the five prototypes that are feasible to develop in the base case.

  - Given the current market context, it is unlikely that housing prices will increase this much in the short term, suggesting that it could take a number of years for prices to increase sufficiently to offset the costs of complying with the proposed inclusionary requirements.

- Feasibility is likely to be restored sooner for the wood-frame building types in the strongest market areas, as exemplified by Prototypes B, D, and E.

  - These are the projects with stronger feasibility in the base case. A combination of adjustments in land prices, housing prices, and development return could occur more quickly than for the other prototypes.

- Effects of the inclusionary requirements could encourage wood-frame construction over steel/concrete construction since the requirements would increase the already high costs of developing the larger building types, as exemplified by Prototypes F and G. To some extent, this is already happening in the current market context under the base case.

  - For the higher-cost building types, the housing prices required for a feasible project with an inclusionary program would need to be at levels above those achieved in Oakland thus far, and therefore could take time to achieve. In addition, possible land price adjustments could make relatively small contributions to restoring feasibility for these projects.

- Lower-priced housing projects, as exemplified by Prototypes A and C, could require significant adjustments to offset inclusionary costs.

  - The ability of land price adjustments to offset inclusionary costs is limited. Similarly, lower development return is unlikely to help offset inclusionary costs, since these projects already have returns at or just above the feasibility thresholds in the base case.

  - Higher housing prices may not be obtainable in some of the locations where these projects could be built, unless there is a general increase in housing prices throughout the broader market.

**Comments Regarding Implications for Other Housing Types**

- *Rental Housing.* Rental housing is not currently feasible to develop under the base case as rents are not high enough to cover development costs or to provide returns competitive with those from for-sale housing. With additional costs for inclusionary housing requirements, it would likely take longer for rental housing development to reach feasibility thresholds, as larger increases in market rents over time would be required.

- *Housing Development in the Eastlake and San Antonio Areas.* The proposed inclusionary housing requirements could have greater effects on development of Prototypes D and E in the Eastlake and San Antonio neighborhoods than described herein for development in somewhat stronger market areas. As prices for new housing in the Eastlake and San Antonio areas would likely be lower than identified for Prototypes D and E, while development costs would be fairly similar, the additional costs of inclusionary requirements could have more effects

on project feasibility and require greater market adjustments to incorporate the additional costs. The opposite would apply for development of Prototype C in the Eastlake and San Antonio areas, where inclusionary housing requirements could have lesser effects on development than described herein, as revenues could be higher in these neighborhoods and feasibility levels above the threshold, compared to Prototype C in somewhat weaker market areas.

# VI. SENSITIVITY ANALYSIS OF ALTERNATIVE ORDINANCE PARAMETERS FOR AN INCLUSIONARY HOUSING PROGRAM

Additional analyses were undertaken to test the impacts of alternative ordinance parameters, focusing on differences in the percentages of inclusionary units required, and differences in the affordable sales prices for the inclusionary housing. The alternatives tested assumed lesser requirements that would have lower costs of compliance than the inclusionary requirements in the October 2006 ordinance proposal. The sensitivity testing was done with the consultants working with the City's Inclusionary Housing Blue Ribbon Commission and with City staff.

The findings of the sensitivity analyses show that changes in ordinance parameters could make a difference in lessening impacts on housing project feasibility in Oakland. With less stringent requirements resulting in lower costs of compliance, an inclusionary program could be more successful in producing inclusionary housing units sooner and with fewer market impacts.

While each of the alternatives evaluated has the effect of reducing impacts and the market adjustments needed to offset inclusionary costs, the results are not substantially different from those for the proposed requirements until fairly large changes in requirements are assumed. Housing development throughout Oakland is not so profitable that it can easily absorb the additional costs of an inclusionary housing program. The findings of the sensitivity analysis are summarized and explained in this chapter.

## APPROACH FOR SENSITIVITY ANALYSIS

The sensitivity testing involved use of the spreadsheet models developed for the analyses summarized in Chapters III, IV, and V to (a) calculate the costs of alternative inclusionary requirements for the housing prototypes, and (b) test the effects of these costs on housing project feasibility. For each alternative, the costs of the requirements were identified and then input into the financial pro formas for the Oakland housing prototypes. All other assumptions remained unchanged. The alternatives were first tested individually and then in combination for the options of interest to policy-makers and City staff.

The sensitivity testing of alternatives focused on evaluating effects of inclusionary costs on the financial return from development, and on the implications for project feasibility. For each alternative, the financial results were evaluated to identify those prototypes where the return from development would meet the thresholds for feasibility, and those prototypes where it still would not. Comparison of the results across alternatives and with the impact analysis of the October 2006 ordinance requirements, identified if an alternative would make a difference in whether or not projects would be feasible to develop after inclusionary requirements are met.

## SENSITIVITY TESTING OF ALTERNATIVE PERCENTAGES OF INCLUSIONARY UNITS REQUIRED

Numerous alternatives were tested to identify the sensitivity of housing project feasibility to the percentage requirements for inclusionary units. The alternatives include the following:

| | Alternatives Tested | |
|---|---|---|
| – Oct. 2006 proposed ordinance | 15% on-site | 20% off-site/in-lieu fee |
| – Sensitivity analysis of alternatives with lower requirements: | 15% on-site | 15% off-site/in-lieu fee |
| | 10% on-site | 15% off-site/in-lieu fee |
| | 10% on-site | 10% off-site/in-lieu fee |
| | 5% on-site | 10% off-site/in-lieu fee |
| | 5% on-site | 5% off-site/in-lieu fee |

For each alternative, the costs of meeting the inclusionary requirements were calculated for the housing prototypes. The lower the percentage requirements for inclusionary units, the lower the costs of compliance in each case. A summary of inclusionary costs for the alternatives is included in Appendix D (see Table D-1).

The costs of the alternative inclusionary requirements were input into the financial pro formas to test effects on project feasibility. Those results are summarized in Table 10 and discussed below. A more detailed summary showing differences in development returns (returns on cost or ROC ratios) among alternatives is presented in Table 11.

### The Percentage of Inclusionary Units Required Makes a Difference in Housing Project Feasibility

Use of lower percentages for inclusionary requirements would have a positive effect on housing project feasibility. As the percentage requirements decline, the number of prototypes that would still be feasible to develop increases. Use of percentage requirements below those proposed in the October 2006 ordinance (15% on-site and 20% off-site and in-lieu fee) will lessen the impact on housing project feasibility, as shown in Tables 10 and 11 and described below.

- *Alternatives: 15% on-site/15% off-site and in-lieu fee, or*
  *10% on-site/15% off-site and in-lieu fee*

  Under these alternatives, returns from development may fall at or above feasibility thresholds for two of the prototypes, Prototypes B and D (wood-frame building types at low-rise to mid-rise densities in stronger market areas). Returns from development may still fall below feasibility thresholds in many cases, however. As inclusionary costs would be lower than costs under the proposed

**TABLE 10**
**SUMMARY OF SENSITIVITY TESTING OF**
**ALTERNATIVE PERCENTAGES OF INCLUSIONARY UNITS REQUIRED**

**Summary of Effects on Project Feasibility**

| Percentage Requirements | Development Prototypes Total | Without Requirements: Number of Prototypes With Returns Above Feasibility Threshold | With Inclusionary Requirements: Number of Development Prototypes With Returns Above Feasibility Threshold: On-Site Compliance | Off-Site Compliance /a/ | In-Lieu Fee | Prototypes Below Feasibility Threshold |
|---|---|---|---|---|---|---|
| **Base Case - No requirements** | 7 | 5 | - | - | - | Highest cost building types |
| **Inclusionary Requirements:** | | | | | | |
| **15%** on-site **20%** off-site /b/ | 7 | - | 0 | 1 | 0 | Most prototypes |
| **15%** on-site **15%** off-site | 7 | - | 0 | 2 | 2 | Many prototypes |
| **10%** on-site **15%** off-site | 7 | - | 1 | 2 | 2 | Many prototypes |
| **10%** on-site **10%** off-site | 7 | - | 1 | 3 | 3 | Highest cost building types, and Lower-priced prototypes |
| **5%** on-site **10%** off-site | 7 | - | 3 | 3 | 3 | Highest cost building types, and Lower-priced prototypes |
| **5%** on-site **5%** off-site | 7 | - | 3 | 4 | 4 | Highest cost building types, and Lowest-priced prototype |

/a/ Costs for off-site compliance may be underestimated, so that return could be lower than calculated.
/b/ Requirements in October 2006 proposed ordinance.

Source: Hausrath Economics Group; with inputs from Vernazza Wolfe Associates, Inc., and City of Oakland.

**TABLE 11**
**SUMMARY OF FEASIBILITY TESTING OF**
**ALTERNATIVE PERCENTAGES OF INCLUSIONARY UNITS REQUIRED**
**(All else remaining constant)**

| | Development Prototypes | | | | | | |
|---|---|---|---|---|---|---|---|
| | **A**<br>**Low-rise THs/**<br>**Row Houses**<br>**EO/WO** | **B**<br>**Low-rise**<br>**Lofts/THs**<br>**NO/WO** | **C**<br>**Lower-rise**<br>**Condos**<br>**EO/WO** | **D**<br>**Lower/Mid-rise**<br>**Condos (4-5 flrs)**<br>**NO/EST** | **E**<br>**Mid-rise Condos**<br>**(4-6 flrs)**<br>**DT** | **F**<br>**Mid-rise Condos**<br>**(6-8 flrs)**<br>**DT** | **G**<br>**High-rise Condos**<br>**(9-16 flrs)**<br>**DT** |
| ROC Feasibility Threshold<br>(net revenue as % of devel. cost) | 16-18% | 16-18% | 16-18% | 18-20% | 18-20% | 20-22% | 22-25% |
| **Base Case** Return on Costs (ROC) | **19%** | **24%** | **17%** | **24%** | **22%** | 14% | 11% |
| ROC with Inclusionary Housing Requirements Met: | | | | | | | |
| **Testing October 2006 Ordinance Proposal - 15% On-Site and 20% Off-Site Requirements** | | | | | | | |
| -- On-Site (15% req.) | 9% | 12% | 9% | 12% | 11% | 3% | Negative |
| -- Off-Site (20% req.) | 11% | **16%** | 9% | 17% | 15% | 9% | 6% |
| -- In-Lieu Fee (20% req.) | 8% | 14% | 5% | 17% | 14% | 8% | 6% |
| **Testing 15% On-Site and 15% Off-Site Requirements** | | | | | | | |
| -- On-Site (15% req.) | 9% | 12% | 9% | 12% | 11% | 3% | Negative |
| -- Off-Site (15% req.) | 13% | **18%** | 11% | **19%** | 16% | 10% | 7% |
| -- In-Lieu Fee (15% req.) | 10% | **16%** | 8% | **18%** | 16% | 10% | 7% |
| **Testing 10% On-Site and 15% Off-Site Requirements** | | | | | | | |
| -- On-Site (10% req.) | 12% | **16%** | 12% | 16% | 14% | 7% | 4% |
| -- Off-Site (15% req.) | 13% | **18%** | 11% | **19%** | 16% | 10% | 7% |
| -- In-Lieu Fee (15% req.) | 10% | **16%** | 8% | **18%** | 16% | 10% | 7% |
| **Testing 10% On-Site and 10% Off-Site Requirements** | | | | | | | |
| -- On-Site (10% req.) | 12% | **16%** | 12% | 16% | 14% | 7% | 4% |
| -- Off-Site (10% req.) | 15% | **20%** | 13% | **21%** | **18%** | 11% | 9% |
| -- In-Lieu Fee (10% req.) | 13% | **19%** | 11% | **20%** | **18%** | 11% | 8% |
| **Testing 5% On-Site and 10% Off-Site Requirements** | | | | | | | |
| -- On-Site (5% req.) | 15% | **20%** | 14% | **20%** | **18%** | 11% | 7% |
| -- Off-Site (10% req.) | 15% | **20%** | 13% | **21%** | **18%** | 11% | 9% |
| -- In-Lieu Fee (10% req.) | 13% | **19%** | 11% | **20%** | **18%** | 11% | 8% |
| **Testing 5% On-Site and 5% Off-Site Requirements** | | | | | | | |
| -- On-Site (5% req.) | 15% | **20%** | 14% | **20%** | **18%** | 11% | 7% |
| -- Off-Site (5% req.) | **17%** | **22%** | 15% | **22%** | **20%** | 13% | 10% |
| -- In-Lieu Fee (5% req.) | **16%** | **21%** | 14% | **22%** | **20%** | 13% | 9% |

NOTE: Bold indicates return (ROC) at or above threshold for feasibility.
Costs for off-site compliance may be underestimated, so that return (ROC) could be lower than shown here. There could be additional hassles and risks associated with developing two projects in the same timeframe, the costs of which cannot be easily quantified.

Source: Hausrath Economics Group, with inputs from Vernazza Wolfe Associates, Inc. and City of Oakland.

ordinance, fewer market adjustments would be needed to eventually offset inclusionary costs.

- *Alternatives: 10% on-site/10% off-site and in-lieu fee, or 5% on-site/10% off-site and in-lieu fee*

  Under these alternatives, returns from development may fall at or above feasibility thresholds for three of the prototypes, B, D, and E. These are wood-frame building types in the stronger market areas throughout the city. Returns may still fall below feasibility thresholds for the rest of prototypes, including the higher-cost building types and the lower-priced prototypes. As inclusionary costs would be lower than under the ordinance proposal or the alternatives described above, less market adjustment would be needed to offset inclusionary costs.

- *Alternative: 5% on-site/5% off-site and in-lieu fee*

  Under this lowest cost alternative, housing project feasibility comes closest to that under the base case without inclusionary housing. Returns from development may be at or above feasibility thresholds in many cases, or for four of the housing prototypes tested, B, D, E, and A. Impacts on feasibility would still be likely for the lowest-priced entry-level housing (where return from development just reaches the feasibility threshold in the base case) and for the highest-cost building types (where returns are below feasibility thresholds in the base case).

### The Percentage Requirement for Off-Site Compliance is Particularly Important

The sensitivity testing indicates that the percentage requirement for *off-site* compliance is particularly important and can have more effect on the feasibility of compliance than the on-site percentage requirement. The off-site percentage is the basis for the in-lieu fee as well as the off-site compliance option. Further, the analysis shows that the costs of off-site/in-lieu fee compliance are lower than the costs for on-site compliance in most cases. Thus, among compliance options, most developments would choose to pay the in-lieu fee or to provide units off-site, making these options the basis for determining the impacts of an inclusionary housing program.

### A Lower On-Site Percentage Requirement Could Provide Options for On-Site Compliance

If policy-makers are interested in providing options for on-site compliance, the sensitivity analysis indicates that the requirement for on-site compliance needs to be substantially lower than that for off-site/in-lieu fee compliance (see results in Table 11[9]). When the percentage requirements are the same for both on-site and off-site/in-lieu fee compliance, the costs for on-

[9] Also see the table summarizing the costs of alternative percentage requirements (Table D-1) in Appendix D.

site compliance are substantially higher for almost all prototypes[10], so that developers typically would not choose on-site compliance. When the on-site percentage requirements are five percent and even 10 percent lower, the costs of on-site compliance are still the highest in many cases, although there is less difference in costs among compliance options and the possibility that on-site compliance could make sense in some cases.

The sensitivity analysis also shows that the differences in costs between on-site and off-site compliance have less effect on project feasibility under alternatives with lower overall inclusionary requirements (such as under the alternative with 5% on-site and 10% off-site/in-lieu fee requirements compared to the proposed ordinance requirements of 15% on-site and 20% off-site/in-lieu fee requirements). Thus, the likelihood for on-site compliance could be higher with lower inclusionary requirements.

## TESTING ALTERNATIVE AFFORDABLE SALES PRICES FOR INCLUSIONARY HOUSING UNITS

The costs of inclusionary housing requirements are also affected by the sales prices for the affordable housing units. From the perspective of the primary, market-rate project, the higher the affordable sales prices, the lower the cost of inclusionary requirements and vice versa.

Sensitivity analysis of variables affecting affordable sales prices was undertaken to evaluate effects on housing project feasibility. The sensitivity testing held all other variables constant, including the percentages of inclusionary units required, which are assumed to be those proposed in the City's October 2006 proposed ordinance (15% on-site and 20% off-site/in-lieu fee).

The variables tested included the following.

- *Income levels targeted for the affordable housing*

  Two affordable sales price alternatives were tested:

  - Oct. 2006 proposed ordinance — State formula for affordability up to 100% AMI
  - Alternative tested — State formula for affordability up to 120% AMI

  Consistent with State Redevelopment Law, the calculations of affordable sales prices are based on setting total housing costs at 35% of 90% AMI for the original 100% formula and at 35% of 110% AMI for the higher 120% formula.

  Because the State definition of affordable housing cost includes allowances for items not considered by most banks when making mortgage loans, units that

[10] The exceptions are development of the lowest-priced market-rate housing, where there is less difference between market-rate housing prices and affordable housing sales prices.

under the State formula are priced to be affordable up to a particular income level are in practice affordable to households at lower levels of income.

- *Mortgage interest rates*

  In addition, the sensitivity testing looked at the effect of an alternative mortgage interest rate assumption for purchasing the affordable units as that also determines the affordable sales prices for the inclusionary housing. The alternatives tested:

  - Assumption for calculating affordable sales prices 6.875%
  - Alternative tested 6.39775%

  The original assumption is more conservative and based on interest rates in January 2007 when the analysis was first completed.[11] The alternative tested is less conservative and is based on interest rates in June 2007 when the sensitivity testing was done. [12]

  The alternative mortgage interest rate was tested in combination with the alternative affordable sales prices, using the State formula for 120% AMI.

Under the alternative sales price and mortgage interest rate assumptions, affordable sales prices for the inclusionary units would be higher in comparison to the affordable sales prices based on the proposed October 2006 ordinance parameters (and discussed in Chapter IV). Table 12 provides a comparison of the original affordable sales prices based on the proposed ordinance, and the alternative sales prices. The first alternative shows affordable sales prices based on the State formula for affordability up to 120% AMI (and assuming the original mortgage interest rate assumption of 6.875%). The second alternative also uses this formula for affordability up to 120% AMI, but includes the lower mortgage interest rate alternative (6.39775%). (The calculations for these alternative sales prices are presented in Appendix D, Tables D-2 and D-4.)

Under conventional underwriting standards, housing priced at the alternative sales prices shown in Table 12 (nominally affordable to households up to 120% AMI) could actually be affordable to households with incomes as low as 87% AMI. (See calculations in Table D-3 in Appendix D.) As a result, the City could set the affordable sales prices at a higher level than specified in the proposed ordinance and still maintain affordability to households at incomes at or below 100% AMI.

Higher affordable sales prices for the alternatives would reduce the cost of *on-site* compliance. The higher affordable sales prices would also reduce the costs of the *off-site* and *in-lieu fee* compliance options. Tables summarizing the costs for off-site and in-lieu fee compliance for the alternatives are included in Appendix D (see Table D-5 and D-6).

[11] Interest rate based on 6.23% (30-year fixed rate as defined by FNMA's Required Net Yield Rate for 1/25/07) plus an allowance of 0.625% (consistent with the most recent NOFA process), rounded to 6.875%.

[12] Interest rate based on 30-year fixed rate as defined by FNMA's Required Net Yield Rate for 6/1/07 (without additional 0.625%).

For each alternative, the costs of meeting the inclusionary requirements were then calculated for the housing prototypes. A summary of inclusionary costs by prototype for the alternatives is also included in Appendix D (see Table D-7).

**TABLE 12**
**ALTERNATIVE AFFORDABLE SALES PRICES FOR INCLUSIONARY UNITS, COMPARED WITH THOSE FOR THE PROPOSED ORDINANCE**

| Affordable Sales Price Assumptions | Studio | One Bedroom | Two Bedrooms | Three Bedrooms | Four Bedrooms |
|---|---|---|---|---|---|
| Proposed October 2006 Ordinance: State formula for affordability up to 100% AMI | $158,500 | $183,100 | $209,300 | $232,700 | $249,300 |
| Alternative Based on State formula for affordability up to 120% AMI | $200,300 | $232,300 | $262,800 | $293,200 | $314,100 |
| Alternative Based on State formula for affordability up to 120% AMI and Lower Mortgage Interest Rate | $207,000 | $240,700 | $272,700 | $304,700 | $325,700 |

All numbers are rounded.

Source: Vernazza Wolfe Associates, Inc. and the City of Oakland.

The costs of the alternatives by prototype and compliance option were input into the financial pro formas to test the effects on housing project feasibility. The results of testing the feasibility effects of alternative affordable sales prices are summarized in Table 13. A more detailed summary showing the development returns (returns on cost or ROC ratios) for the alternatives is provided in Table 14.

**Increasing the Maximum Sales Price for the Inclusionary Units**
**<u>Makes a Difference in Housing Project Feasibility</u>**

Increasing the price of the inclusionary units (up to the State definition of affordability for households up to 120% AMI) would increase the sales prices for the affordable housing and lower the costs of compliance, compared to the proposed October 2006 ordinance assumptions (State definition of affordability up to 100% AMI).

Higher sales prices for the affordable units make a difference in housing project feasibility. Compared to the October 2006 ordinance proposal where development returns could fall below

**TABLE 13**
**SUMMARY OF SENSITIVITY TESTING OF**
**ALTERNATIVE AFFORDABLE SALES PRICES FOR INCLUSIONARY HOUSING UNITS**

**Summary of Effects on Project Feasibility**

| Percentage Requirements | Development Prototypes Total | Without Requirements: Number of Prototypes With Returns Above Feasibility Threshold | With Inclusionary Requirements: Number of Development Prototypes With Returns Above Feasibility Threshold | | | Prototypes Below Feasibility Threshold |
|---|---|---|---|---|---|---|
| | | | On-Site Compliance | Off-Site Compliance /a/ | In-Lieu Fee | |
| **Base Case - No requirements** | 7 | 5 | - | - | - | Highest cost building types |
| **Percentage Requirements at 15% on-site 20% off-site** /b/ **and Affordable Sales Prices Based on State Formula for Affordability:** | | | | | | |
| up to 100% AMI | 7 | - | 0 | 1 | 0 | Most prototypes |
| up to 120% AMI | 7 | - | 0 | 3 | 2 | Many prototypes |
| up to 120% AMI and Lower Interest Rate | 7 | - | 0 | 3 | 3 | Highest cost building types, and Lower-priced prototypes |

/a/ Costs for off-site compliance may be underestimated, so that return could be lower than calculated.

/b/ Percentage requirements in October 2006 proposed ordinance.

Source: Hausrath Economics Group; with inputs from Vernazza Wolfe Associates, Inc., and City of Oakland.

**TABLE 14**
**SUMMARY OF FEASIBILITY TESTING OF**
**ALTERNATIVE AFFORDABLE SALES PRICES FOR INCLUSIONARY HOUSING UNITS**
**(All else remaining constant)**

| | Development Prototypes | | | | | | |
|---|---|---|---|---|---|---|---|
| | **A** Low-rise THs/ Row Houses EO/WO | **B** Low-rise Lofts/THs NO/WO | **C** Lower-rise Condos EO/WO | **D** Lower/Mid-rise Condos (4-5 flrs) NO/EST | **E** Mid-rise Condos (4-6 flrs) DT | **F** Mid-rise Condos (6-8 flrs) DT | **G** High-rise Condos (9-16 flrs) DT |
| ROC Feasibility Threshold (net revenue as % of devel. cost) | 16-18% | 16-18% | 16-18% | 18-20% | 18-20% | 20-22% | 22-25% |
| **Base Case** Return on Costs (ROC) | **19%** | **24%** | **17%** | **24%** | **22%** | 14% | 11% |
| ROC with Inclusionary Housing Requirements Met: | | | | | | | |
| **October 2006 Ordinance Proposal: State Formula for Ownership Affordability Up to 100% AMI** | | | | | | | |
| -- On-Site (15% req.) | 9% | 12% | 9% | 12% | 11% | 3% | Negative |
| -- Off-Site (20% req.) | 11% | **16%** | 9% | 17% | 15% | 9% | 6% |
| -- In-Lieu Fee (20% req.) | 8% | 14% | 5% | 17% | 14% | 8% | 6% |
| **Testing: State Formula for Ownership Affordability Up to 120% AMI** | | | | | | | |
| -- On-Site (15% req.) | 11% | 14% | 11% | 14% | 12% | 5% | 1% |
| -- Off-Site (20% req.) | 14% | **19%** | 12% | **20%** | **18%** | 11% | 9% |
| -- In-Lieu Fee (20% req.) | 11% | **17%** | 9% | **20%** | 17% | 11% | 8% |
| **Testing: State Forumula for Ownership Affordability Up to 120% AMI and Lower Interest Rate (6.39775% compared to 6.875% for all other cases)** | | | | | | | |
| -- On-Site (15% req.) | 12% | 14% | 12% | 14% | 13% | 5% | 2% |
| -- Off-Site (20% req.) | 15% | **20%** | 13% | **21%** | **18%** | 12% | 9% |
| -- In-Lieu Fee (20% req.) | 12% | **17%** | 10% | **20%** | **18%** | 11% | 8% |

NOTE: Bold indicates return (ROC) at or above threshold for feasibility.
Costs for off-site compliance may be underestimated, so that return (ROC) could be lower than shown here. There could be additional hassles and risks associated with developing two projects in the same timeframe, the costs of which cannot be easily quantified.

Source: Hausrath Economics Group, with inputs from Vernazza Wolfe Associates, Inc. and City of Oakland.

feasibility thresholds in most cases, returns from development for the alternative with higher affordable sales prices could fall *at or above* feasibility thresholds for two to three of the prototypes. Returns may still fall *below* feasibility thresholds for the other development prototypes, including the high-cost building types and the lower-priced prototypes (as summarized in Table 13 and further described in Table 14). As inclusionary costs would be lower for this alternative than under the ordinance proposal, fewer market adjustments would be needed to offset inclusionary costs.

### Higher Affordable Sales Prices Make Most Difference for Off-Site and In-Lieu Fee Compliance

Under this alternative, higher affordable sales prices result in larger differences in inclusionary costs for off-site and in-lieu fee compliance, and smaller differences in costs for on-site compliance, when compared to costs under the ordinance proposal.[13] This explains the outcomes for this alternative as summarized in Table 13, where two to three development prototypes would have returns above feasibility thresholds under off-site or in-lieu fee compliance, while there are no prototypes that appear feasible with on-site compliance.

### A Lower Mortgage Interest Rate in the Sales Price Formula for Affordable Units Could Further Improve Project Feasibility

A lower mortgage interest rate for purchasing the affordable units would yield a modest increase in sales prices for the inclusionary units (as shown in Table 12) and reduce inclusionary costs. When added to the effects of using an alternative formula to calculate the affordable sales prices, a lower mortgage interest rate could make a small, additional improvement in project feasibility with inclusionary requirements. Generally, the returns from development move up about one percentage point (*i.e.*, from 14% ROC to 15% ROC or from 19% ROC to 20% ROC) with the lower interest rate assumption (see Table 14). For one prototype, this change would move the return up to the feasibility threshold (see Table 13).

## COMBINED EFFECTS OF ALTERNATIVE PERCENTAGE REQUIREMENTS AND HIGHER AFFORDABLE SALES PRICES

Based on the results of testing alternative requirements individually as described above, combinations of options were tested to evaluate the combined effects of several alternatives. The options tested include several different percentages of inclusionary units required combined with the higher affordable sales prices in each case. The specific assumptions for the combined options are the following:

[13] The differing effects on costs reflect the differences in how the costs are calculated for each compliance option. Higher affordable sales prices make more difference in compliance costs that reflect the gap between affordable housing development costs and affordable sales prices (for the off-site and in-lieu fee compliance options) than in compliance costs that reflect the difference between market-rate prices and affordable sales prices (for on-site compliance). The differences in costs are shown in Table D-7 in Appendix D.

- Alternative Percentages of Inclusionary Units Required
  - Four alternatives:

| | |
|---|---|
| 15% on-site | 20% off-site/in-lieu fee |
| 10% on-site | 15% off-site/in-lieu fee |
| 10% on-site | 10% off-site/in-lieu fee |
| 5% on-site | 10% off-site/in-lieu fee |

- Higher Affordable Sales Prices for Inclusionary Units
  - Ownership housing priced using the State definition of affordability to households up to 120% AMI.

    Consistent with State Redevelopment Law, the calculations of affordable sales prices are based on housing costs equal to 35% of 110% AMI. In addition, the calculations assume a mortgage interest rate for purchasing the affordable units at 6.875% (original assumption for this study).

For each combined option, the costs of meeting the inclusionary requirements were calculated for the housing prototypes. Then, the costs were input into the financial pro formas to test effects on project feasibility under each option. All other assumptions were unchanged.

The results are summarized in Table 15 and highlighted below. A more detailed summary showing development returns (returns on cost or ROC ratios) is presented in Table 16. A summary of inclusionary costs of the combined options is included in Appendix D (see Table D-8).

**Combined Options Have Smaller Impacts and Could Produce Affordable Housing Sooner, Particularly the Options With 10%/10% or 5%/10% Inclusionary Requirements**

The combination of higher affordable sales prices and lower percentage requirements for inclusionary units would result in lower costs of inclusionary requirements that would have smaller effects on housing project feasibility. This is particularly the case for the two options that assume:

- Affordable sales prices using State formula for affordability up to 120% AMI and inclusionary requirements at:
  - 10% on-site 10% off-site/in-lieu fee
  - 5% on-site 10% off-site/in-lieu fee

**TABLE 15**
**SUMMARY OF SENSITIVITY TESTING OF**
**ALTERNATIVE PERCENTAGES OF INCLUSIONARY UNITS REQUIRED,**
**ASSUMING HIGHER AFFORDABLE SALES PRICES**

**Summary of Effects on Project Feasibility**

| Percentage Requirements | Development Prototypes Total | Without Requirements: Number of Prototypes With Returns Above Feasibility Threshold | With Inclusionary Requirements: Number of Development Prototypes With Returns Above Feasibility Threshold: On-Site Compliance | Off-Site Compliance /a/ | In-Lieu Fee | Prototypes Below Feasibility Threshold |
|---|---|---|---|---|---|---|
| **Base Case - No requirements** | 7 | 5 | - | - | - | Highest cost building types |
| **Affordable Sales Prices Based on State Formula for Affordability Up to 120% AMI and Inclusionary Requirements:** | | | | | | |
| **15%** on-site **20%** off-site | 7 | - | 0 | 3 | 2 | Many prototypes |
| **10%** on-site **15%** off-site | 7 | - | 1 | 3 | 3 | Highest cost building types, and Lower-priced prototypes |
| **10%** on-site **10%** off-site | 7 | - | 1 | 4 | 3 | Highest cost building types, and Lower-priced prototypes |
| **5%** on-site **10%** off-site | 7 | - | 4 | 4 | 3 | Highest cost building types, and Lowest-priced prototype |

/a/ Costs for off-site compliance may be underestimated, so that return could be lower than calculated.

Source: Hausrath Economics Group; with inputs from Vernazza Wolfe Associates, Inc., and City of Oakland.

**TABLE 16**
**SUMMARY OF FEASIBILITY TESTING OF**
**ALTERNATIVE PERCENTAGES OF INCLUSIONARY UNITS REQUIRED, ASSUMING HIGHER AFFORDABLE SALES PRICES**
**(All else remaining constant)**

| | Development Prototypes | | | | | | |
|---|---|---|---|---|---|---|---|
| | **A**<br>**Low-rise THs/ Row Houses**<br>**EO/WO** | **B**<br>**Low-rise Lofts/THs**<br>**NO/WO** | **C**<br>**Lower-rise Condos**<br>**EO/WO** | **D**<br>**Lower/Mid-rise Condos (4-5 flrs)**<br>**NO/EST** | **E**<br>**Mid-rise Condos (4-6 flrs)**<br>**DT** | **F**<br>**Mid-rise Condos (6-8 flrs)**<br>**DT** | **G**<br>**High-rise Condos (9-16 flrs)**<br>**DT** |
| ROC Feasibility Threshold (net revenue as % of devel. cost) | 16-18% | 16-18% | 16-18% | 18-20% | 18-20% | 20-22% | 22-25% |
| **Base Case** Return on Costs (ROC) | **19%** | **24%** | **17%** | **24%** | **22%** | 14% | 11% |
| ROC with Affordable Sales Prices Based on State Formula for Affordability Up to 120% AMI and Inclusionary Requirements: | | | | | | | |
| **15% On-Site and 20% Off-Site** | | | | | | | |
| -- On-Site (15% req.) | 11% | 14% | 11% | 14% | 12% | 5% | 1% |
| -- Off-Site (20% req.) | 14% | **19%** | 12% | **20%** | **18%** | 11% | 9% |
| -- In-Lieu Fee (20% req.) | 11% | **17%** | 9% | **20%** | 17% | 11% | 8% |
| **10% On-Site and 15% Off-Site** | | | | | | | |
| -- On-Site (10% req.) | 14% | **17%** | 13% | 17% | 16% | 8% | 5% |
| -- Off-Site (15% req.) | 15% | **20%** | 13% | **21%** | **19%** | 12% | 9% |
| -- In-Lieu Fee (15% req.) | 13% | **18%** | 11% | **20%** | **18%** | 12% | 8% |
| **10% On-Site and 10% Off-Site** | | | | | | | |
| -- On-Site (10% req.) | 14% | **17%** | 13% | 17% | 16% | 8% | 5% |
| -- Off-Site (10% req.) | **16%** | **21%** | 15% | **22%** | **20%** | 13% | 10% |
| -- In-Lieu Fee (10% req.) | 15% | **20%** | 13% | **22%** | **19%** | 12% | 9% |
| **5% On-Site and 10% Off-Site** | | | | | | | |
| -- On-Site (5% req.) | **16%** | **20%** | 15% | **21%** | **19%** | 11% | 8% |
| -- Off-Site (10% req.) | **16%** | **21%** | 15% | **22%** | **20%** | 13% | 10% |
| -- In-Lieu Fee (10% req.) | 15% | **20%** | 13% | **22%** | **19%** | 12% | 9% |

NOTE: Bold indicates return (ROC) at or above threshold for feasibility.
Costs for off-site compliance may be underestimated, so that return (ROC) could be lower than shown here. There could be additional hassles and risks associated with developing two projects in the same timeframe, the costs of which cannot be easily quantified.

Source: Hausrath Economics Group, with inputs from Vernazza Wolfe Associates, Inc. and City of Oakland.

The feasibility testing of these combined options, as summarized in Tables 15 and 16, shows there is at least one feasible compliance option for four of the housing prototypes, including Prototypes A, B, D, and E. The returns for a fifth prototype, Prototype C, are just below the feasibility threshold. The results for Prototypes F and G are still below feasibility thresholds, largely reflecting market conditions in the base case.

**Most Likely to Produce Affordable Units Sooner and With Less Impacts**

Among all of the alternatives and options tested, these two combined options could be the most successful in producing inclusionary housing units sooner with fewer market impacts. Returns from development would still be less than under the base case without inclusionary requirements. However, because of lower impacts, it is likely that market adjustments to offset the costs of inclusionary housing could occur sooner than under other, more costly alternatives, including the October 2006 ordinance proposal.

**Lower On-Site Percentage Could Provide Options for On-Site Compliance**

There is a significant difference between the two alternatives for *on-site* compliance: 5% or 10% inclusionary units required. With the 5% requirement, on-site compliance could be feasible for four housing prototypes, whereas on-site compliance would only be feasible for one prototype with the 10% requirement (see results in Table 15 and 16). Although, in many cases, the costs of on-site compliance would still be higher than costs for off-site compliance or payment of the in-lieu fee, use of a 5% on-site requirement would improve the chances that some developers could choose on-site compliance over the other options. Further, at these lower overall percentage requirements, the differences in costs between the on-site and off-site options are small enough to make it more likely that affordable units would be included within market-rate projects.

**Impacts of Other Combined Options More Similar to Other Alternatives Tested**

The impacts for the other two combined options tested:

- Affordable prices using State formula for affordability up to 120% AMI and inclusionary requirements at:
    - 5% on-site 20% off-site/in-lieu fee
    - 10% on-site 15% off-site/in-lieu fee

show results similar to those for several of the individual alternatives tested and discussed earlier in this chapter (see summaries in Table 10 and Table 13). They would have fewer economic impacts than the original requirements in the October 2006 ordinance proposal, but greater impacts than the two composite options discussed above.

In these two cases, the feasibility testing shows at least one feasible compliance option for three of the housing prototypes, including Prototypes B, D, and E representing the wood-frame building types in the stronger market areas. There still would be feasibility impacts for highest-cost building types and the lower-priced housing prototypes. The higher costs for these two

combined options, would require more market adjustments to offset inclusionary costs. It would take longer for these adjustments to occur, compared to those under the two composite options with lower percentage inclusionary requirements that are described above.

## SUMMARY OF SENSITIVITY TESTING, AND COMMENTS REGARDING POSSIBLE PHASING-IN OF INCLUSIONARY PROGRAM

A number of inclusionary program alternatives are evaluated in this chapter, in addition to the original ordinance proposal evaluated in the previous chapter. In each case, inclusionary requirements would have impacts on housing project feasibility. Housing development throughout Oakland is not so profitable that it can easily absorb the additional costs of inclusionary housing. The more costly the inclusionary requirements, the greater the implications for housing project feasibility, and the greater the time needed for housing market adjustments to incorporate the additional costs.

Among alternatives, adoption of an inclusionary program with lesser requirements and lower costs of compliance could be the most successful in producing inclusionary housing sooner and with fewer market impacts. Examples are provided by the combined options with lower requirements in the previous section.

### Phasing-in an Inclusionary Requirement

If an ordinance were to include requirements at the mid-level or higher end of the range of costs for an inclusionary program, "phasing in" such a program over time could help accommodate the necessary market adjustments. "Phasing-in" could include implementation of lower-cost requirements for a period of time followed by the more costly requirements at a later time. The effect of "phasing-in" inclusionary requirements would be to allow more time for market adjustments. It also could allow time for overall market conditions to improve.

The benefits of this approach would depend, however, on trends in the broader housing market context during the phasing-in period. Improving market conditions for new housing would help accommodate the costs of inclusionary requirements, while stable or declining conditions would not.

The phasing-in of an inclusionary housing program may not in itself eliminate or substantially reduce impacts, particularly for the higher cost alternatives. The impacts are still primarily a function of the costs of the inclusionary requirements. However, the benefits of phasing-in inclusionary requirements would allow more time for market adjustments to occur and would give the market an early signal regarding future compliance costs, which could be especially important when developers are negotiating land purchase prices.

From a broader housing policy point of view, the phasing-in of inclusionary requirements should not be implemented only to reduce requirements on near-term projects with vocal opposition to the inclusionary proposal. The decision on the *level* of inclusionary requirements should take a longer-term view and focus on the implications of the costs of such requirements, independent of

whether they would impact near-term or longer-term housing development. Phasing-in a more costly alternative may not reduce impacts on longer-term development. The result could push the impacts out in time and discourage or delay the next cycle of development activity if the market fails to adjust as anticipated.

**Should Implementation be Tied to Market-Based "Triggers"**

A question has been raised about the use of market indicators to monitor housing market conditions and identify when to implement inclusionary requirements or to increase requirements under a phased program. While the idea of using a market indicator as a "trigger" sounds desirable, it is unlikely to be workable given the complexities of the housing market and the difficulties involved in obtaining useful data on a timely basis. Comparable data are not available on a sub-market basis (related to the different prototypes for housing development in Oakland) or for the different market conditions of relevance (housing prices, land prices, amounts of new construction). Further, the data that are available often document conditions after they have occurred and are not as useful in anticipating market conditions. It also is difficult to identify the specific benchmarks or thresholds to use as signals for a change in policy. Instead, it could be more workable to adopt an inclusionary program that is clear in intent and requirements, and in the timing for implementation. This approach provides more clarity and certainty to those involved in the market. Over time, the requirements could be changed if needed.