STRATEGICECONOMICS

FINAL MEMORANDUM

Date:	June 2, 2017
To:	Deepak Neupane, Hawaii Community Development Authority
From:	Nadine Fogarty, Sujata Srivastava, and Jake Cummings
Project:	Feasibility Analysis of Proposed Kaka'ako Reserved Housing Rules
Subject:	Final Memorandum Report

CONSULTANT QUALIFICATIONS

Strategic Economics, Inc. is a nationally recognized urban economics consulting firm located in Berkeley, California. The firm provides real estate economic analysis and advisory services to governments, developers, community groups, and non-profits to create sustainable, high-quality places for people to live and work. Strategic Economics has extensive experience with affordable housing policies, funding strategies, and development feasibility, including the recently completed evaluation of the Affordable Housing Requirement for the City and County of Honolulu.

Nadine Fogarty and Sujata Srivastava, Principals at Strategic Economics, each have over 15 years of experience providing technical analysis and policy advice to a wide variety of clients. They specialize in working in high-value coastal markets in the U.S., including the Bay Area, Seattle, Boston, Los Angeles, and Honolulu.

QUESTIONS PRESENTED

Strategic Economics was retained by the Hawaii Community Development Authority (the Authority) to address the following questions:

- Does the proposed Kaka'ako Reserved Housing Rules Amendment hinder the financial feasibility of for-sale residential development in the area?
- Are the proposed provisions regarding resale, equity sharing, and affordability terms for Reserved and Workforce housing likely to affect the viability of new for-sale projects?

DESCRIPTION OF PROPOSED RULE

Key provisions in the Kaka'ako Reserved Housing Rules relevant to this analysis are summarized below.

Affordability targets (for-sale): Reserved and Workforce units are targeted to households with incomes between 100% and 140% Area Median Income (AMI). The average weighted sales price of reserved and workforce units must be at or below 120% AMI.

Term of affordability restriction: The terms for preserving the affordability of Reserved and Workforce housing (during which prices are restricted) are extended to perpetuity.

Resale: The proposed rules provide a first option for the Authority to purchase the Reserved and Workforce units at the time of resale, and establish a formula for the buyback price if purchased by the Authority. The buyback price is calculated based on the original fair market value, appreciated annually by an index published by the Honolulu Board of Realtors for condominiums, less the Authority's share of equity in the unit (calculated as the original reduction in sales price relative to original fair market value).

Equity sharing: If the Authority waives its first option to purchase the reserved and workforce units, it may be sold at a fair market price. The Authority's share of the equity upon sale is calculated as follows:

$$\textbf{\textit{Resale fair market value}} \times \frac{\textbf{\textit{Original fair market value}} - \textbf{\textit{Original sales price}}}{\textbf{\textit{Original fair market value}}}$$

ASSUMPTIONS AND ANALYSIS

Financial Feasibility of Development

Strategic Economics developed a static pro forma model to test the feasibility of development in Kaka'ako using the assumptions described below. The pro forma model evaluates feasibility using building prototypes that reflect typical characteristics of development in Kaka'ako. The model incorporates assumptions about development costs, including land, direct construction costs, and all indirect costs. Revenues from sales of market rate, Reserved, and Workforce units are also calculated. The total development costs are subtracted from total revenues, with the balance representing the net revenue, or developer return. To achieve feasibility, projects must exceed a threshold level of developer return. The assumptions used in this analysis are described below, and the detailed pro forma models are provided later in this memo.

Building Prototypes

The building prototypes used in this study are based on prototypes developed for the Affordable Housing Requirement Financial Analysis prepared for the City and County of Honolulu in 2016, with some modifications. The building prototypes were assumed to have cast-in-place concrete towers on a concrete parking podium and would range from 20 to 40 stories, including the podium levels. The unit mix and parking ratios are representative of the Kaka'ako market.

As shown in Figure 1, the Reserved housing prototype is a high-rise building on a one-acre parcel with a floor-area-ratio (FAR) of 4.2. The FAR is based on a 3.5 FAR base density, plus a 20 percent density bonus for the reserved units. The Workforce housing prototype is a high-rise building with an FAR of 7.0 (the base FAR is 3.5 with a 100 percent density bonus).

Figure 1: Building Prototypes

	High-rise w/ 20% Reserved	75% Workforce High-rise
Parcel Size	1 acre	1 acre
Gross sf	182,764	303,637
Net sf	151,694	255,055
Floor Area Ratio	4.2 (20% Bonus)	7.0 (100% Bonus)
Number of Units	204	343
Market Rate	163	120
Reserved/Workforce (120% AMI)	41	223
Unit Mix		
1-BR	35%	35%
2-BR	65%	65%
Parking Spaces (Podium)	235	379
Parking Ratio	1.2	1.1

Source: Architects Hawaii, Ltd., 2016; Strategic Economics, 2017.

Revenue Assumptions

The revenue assumptions used in the analysis are shown in Figure 2. The average sales price for market rate units is assumed to be targeted to a mid- to high-range local buyer market. Price are based on a review of recent condominium sales in newly constructed high-rise developments, including Waihonua (1189 Waimanu St), Symphony (888 Kapiolani Blvd), and the Collection Honolulu (600 Ala Moana Blvd).

The sales prices for income-restricted Reserved and Workforce units assume typical occupancy standards (a two-person household occupies a one-bedroom unit; a three-person household occupies a two-bedroom unit). The analysis assumes that units will be sold at a weighted sales price targeting 120 percent of area median income (AMI). This is a reasonable assumption given that the maximum affordability level is 140 percent AMI, and that some Reserved and Workforce units may be sold at the lower end of the range.

The estimated sales prices assume a ten percent down payment and interest rate of 4.09 percent, which is the average of the most recent six months on thirty-year fixed rate mortgages published by Freddie Mac. Sales and marketing cost assumptions are based on consultations with the local development community and are consistent with typical high-rise condominium projects.

Figure 2: Revenue Assumptions

	1-BR	2-BR	Sources and Notes
Unit Size (net sf)	572	836	*Unit mix and size are from prototypes designed by Architects Hawaii Ltd.*
Unit Mix	35%	65%	
Avg Market Rate Price	$558,000	$765,000	*Sales prices are based on a survey of recent high-rise condo sales in Kaka'ako*
Avg Reserved/Workforce Price (120% AMI)	$456,000	$497,000	*Below Market Prices assume an average household income of 120% of AMI, 10% down payment, and 4.09% interest rate*
Sales and Marketing Costs (%)	5.5%	5.5%	*Sales and marketing costs are based on local developer feedback*

Cost Assumptions

The direct cost assumptions used in this analysis build on costs developed for use in the 2016 Affordable Housing Requirement Feasibility Analysis, specifically the costs used for the Ala Moana building prototypes. These costs were developed with input from members of the local development community. To update the 2016 estimates, Strategic Economics applied a 4.25 percent escalation factor, derived from the historical construction cost index published by the Department of Business, Economic Development, and Tourism (DBEDT). The per square foot construction costs for Workforce housing projects are assumed to be 10 percent lower than for projects with Reserved housing because they are expected to have fewer amenities and more basic finishes. (Figure 3).

Soft costs (including architecture, engineering, taxes, insurance, fees, financing, contingency, developer overhead, and all other soft costs) are estimated as a percentage of total direct costs. For the Reserved housing prototype, soft costs are assumed to be 35 percent. Soft costs for Workforce housing are assumed to be 30 percent of direct costs.

Land costs are based on recent sales comps in the area, which range from $200 to $500 per square foot. For this analysis, Strategic Economics selected the mid-point of the range, $350 per square foot.

Feasibility Threshold Assumptions

Return on cost is a commonly used measure of project profitability for condominium developments. Return on cost is equal to net revenue (or "return") divided by total development cost. Based on consultation with developers with experience building high-rise projects in Honolulu, the feasibility threshold for both prototypes in this analysis was set at 18 percent return on cost. Note, however, that developers of low-income and workforce housing projects may have a lower return expectation, given that those projects typically face lower market risk.

Figure 3: Development Cost Assumptions

	High-rise w/ 20% Reserved	High-rise w/75% Workforce	Sources and Notes
Direct Costs			*All direct costs are based on the 2016 AHR analysis assumptions with a 4.25% escalation factor. Workforce housing residential area costs assumed to be 10% lower than a mostly market rate project*
Site Prep / Demolition (per sf land)	$26	$26	
Residential Area (per gsf)	$313	$281	
Podium Parking (per space)	$39,615	$39,615	
Soft Costs (% of Hard Costs)	35%	30%	*Includes development fees, financing, contingency, developer fee, and all other soft costs for the project. Workforce housing soft costs assumed to be at a lower rate than a mostly market rate project*
Land (per sf)	$350	$350	*Based on recent property transactions*
Return on cost feasibility threshold	18%	18%	*Based on interviews with local developers*

RESALE, EQUITY SHARING AND TERMS OF AFFORDABILITY

Strategic Economics compared the amended rules regarding terms of affordability, resale, and equity sharing to other inclusionary housing policies in other large U.S. cities, including Seattle, San Francisco, New York, and Washington, D.C. Each of these policies are summarized in Figure 4 on the following page.

As shown, all the policies have affordability terms of 75 years or for the life of the project. In all cases, the owners are required to sell the units to buyers at the same AMI level (exceptions apply if the unit cannot easily be sold). In addition, all of the policies cap the resale price using a fixed annual appreciation rate or index that is not designed to reflect changes in the real estate market. Because the resale price is restricted, any profit from resale goes to the owner for all the cases studied.

Figure 4: Case Studies of Inclusionary Zoning Policies for Ownership Affordable Units

City	Set-Aside Requirement (On-Site)	Income Target	Period of Affordability	Sale/Buy Back Provisions	Resale Price
Seattle, WA	Between 5 and 11% of all units (varies by geographic area)	80% of AMI (or less)	**75 years**	Owners are required to sell units to buyers at the same AMI level at which the unit was set at the time of purchase.	**Resale price is capped and calculated using a fixed-rate formula:** The maximum allowed resale price is the initial sales price increased over time by 1.5% annually (with annual compounding). The cost of eligible capital improvements may also be added on, under certain conditions. The total sale price goes to the owner.
San Francisco, CA	12% of all units for projects with fewer than 25 units; 25% of all units for projects larger than 25 units	90% of AMI (or less)	**Permanent** ("All units constructed must remain affordable to qualifying households for the life of the project", Planning Code section 415.8)	Owners are required to sell to buyers at the same AMI level at which the unit was set at the time of purchase. However, certain allowances exist for units that cannot resale in a timely manner and after a good faith effort, including a one-time increase in the maximum qualifying income level.	**Resale price is capped and calculated using an index-based formula:** The maximum allowed resale price is the initial sale price increased by the percentage change in AMI between the initial year of purchase and the year of resale. The cost of eligible capital improvements, special assessments, and use of certified realtors may also be added on, under certain conditions. The total sale price goes to the owner.
New York, NY	25% of all units if 60% AMI target; 30% set-aside if 80% AMI target	60% of AMI or less, with at least 10% of units at 40% of AMI; OR 80% of AMI	**Permanent** ("All affordable residential units created through the Inclusionary Housing Program must remain permanently affordable", New York City Inclusionary Housing Webpage)	Owners are usually required to sell to buyers at the same AMI level at which the unit was set at the time of purchase. However, certain exceptions apply if the unit is not easily sold. Qualified buyers must always demonstrate a household income equal to 25-35% of the maximum sale price.	**Resale price is capped and must be the lowest of the following two options: (1) Appreciation Cap**, determined so as to be affordable to the following (higher) income level to which the unit was initially set (i.e. 30% of that targeted income limit); or **(2) Appreciated Price (index-based formula),** which is the initial sale price increased using an annual appreciation rate (CPI + 1%) between the initial year of purchase and the year of resale. No additional costs from capital improvements may be added on. The total sale price goes to the owner.
Washington D.C.	8-10 % of the total floor area	50-80% of AMI (varies by geographic area)	**Permanent**	Owners are required to sell units to buyers at the same AMI level at which the unit was set at the time of purchase. However, certain exceptions apply if the unit is not easily sold.	**Resale price is capped and calculated using an index-based formula:** The maximum allowed resale price is the initial sale price increased by the sum of the ten-year compound annual growth rate of the AMI between the initial year of purchase and the year of resale. The cost of eligible capital improvements may also be added on. The total sale price goes to the owner.

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CONCLUSIONS

Key conclusions from the analysis are summarized below. See Figures 5, 6, and 7 for the results of the pro forma analysis.

Financial Feasibility of Development

Both the Reserved and Workforce prototypes tested were found to be feasible under the proposed rules. Both the Reserved housing and Workforce housing prototypes meet the minimum 18 percent return on cost threshold. It is likely that the Workforce housing prototype could support a lower developer return given that these projects tend to have reduced market risk. Larger projects on sites over one acre would likely achieve cost efficiencies and generate stronger returns.

Value of Density Bonus

The density bonus provided to Reserved and Workforce housing developments increases net revenues for both projects significantly. The density bonus of 20 percent for Reserved housing allows for an FAR increase from 3.5 to 4.2. The bonus enhances total net revenues (total sales value minus total development cost) by $6.4 million, or $18,220 per unit. For Workforce housing, the density bonus allows projects to double the FAR from 3.5 to 7.0. Under the base FAR of 3.5, the net revenue from the Workforce housing is negative. The density bonus increases net revenue by $31.8 million ($110,646 per unit).

Resale, Equity Sharing and Terms of Affordability

The proposed resale and equity sharing provisions offer greater potential for buyers to build equity than the other U.S. programs surveyed. Under the proposed rules, if the Authority exercises its option to buy back a unit upon resale, the buyer receives a proportion of value increase that is pegged to changes in the Honolulu real estate market. In comparison, other policies in the U.S. require owners to sell the units to buyers at the same AMI level. In addition, prices are capped using a fixed annual appreciation rate or index that is not tied to the real estate market.

The extended affordability term is unlikely to impact project viability. The previous required term, which applied only to Reserved Housing units, maintained affordability of the unit for only 5 years. The new provisions are designed to maintain affordability of the units in perpetuity, and apply to both Reserved and Workforce units. The new requirements will mean that households who purchase income-restricted units are likely to profit less from resale of their unit. While this reduces the investment value of those units for purchasers (who will no longer receive a "windfall" at the time of resale), it does not necessarily mean that the initial unit prices will be discounted. This is particularly true given that the City and County of Honolulu is also in the process of making similar changes to their affordable housing policies (which means that buyers will not have other options for purchasing a unit with preferable terms).

Figure 5: Pro Forma Summary for High-rise Condo with 20 Percent Reserved Units

Prototype

Units	204	Gross sf	182,764
Market Rate	163	Net sf	151,694
Reserved	41	Site Area sf	43,560
Avg Unit net sf	744	FAR	4.2

	Project	Per Unit	Per NSF	% of TDC
Revenues				
Sales Value				
Market Rate Units	$113,001,000	$692,000	$931	106%
Affordable Units	$19,684,000	$482,000	$648	18%
Less Sales and Marketing	-$7,298,000	-$36,000	-$48	-7%
Total Sales Value	**$125,387,000**	**$615,000**	**$827**	**118%**
Development Costs				
Direct Costs				
Site Prep/Demo	$1,135,000	$6,000	$8	1%
Gross Residential Area	$57,160,000	$280,000	$377	54%
Parking	$9,294,000	$46,000	$62	9%
Subtotal Direct Costs	$67,589,000	$332,000	$446	63%
Indirect Costs	$23,656,000	$116,000	$156	22%
Land Costs	$15,246,000	$75,000	$101	14%
Total Development Cost	**$106,491,000**	**$523,000**	**$703**	**100%**
Feasibility				
				Return-on-cost:
Net Revenue	**$18,896,000**	**$92,000**	**$124**	**18%**

Figure 6: Pro Forma Summary for High-rise Condo with 75 Percent Workforce Units

Prototype

Units	343	Gross sf	303,637
Market Rate	86	Net sf	255,055
Workforce	257	Site Area sf	43,560
Avg Unit net sf	744	FAR	7.0

	Project	Per Unit	Per NSF	% of TDC
Revenues				
Sales Value				
Market Rate Units	$59,374,000	$692,000	$931	40%
Affordable Units	$124,108,000	$482,000	$648	84%
Less Sales and Marketing	-$10,091,000	-$29,000	-$39	-7%
Total Sales Value	**$173,391,000**	**$506,000**	**$680**	**118%**
Development Costs				
Direct Costs				
Site Prep/Demo	$1,135,000	$3,000	$4	1%
Gross Residential Area	$85,466,000	$249,000	$335	58%
Parking	$15,014,000	$44,000	$59	10%
Subtotal Direct Costs	$101,615,000	$296,000	$398	69%
Indirect Costs	$30,485,000	$89,000	$120	21%
Land Costs	$15,246,000	$44,000	$59	10%
Total Development Cost	**$147,346,000**	**$429,000**	**$577**	**100%**
Feasibility				
				Return-on-cost:
Net Revenue	**$26,045,000**	**$77,000**	**$104**	**18%**

Figure 7: Impact of Density Bonus on Net Revenue

	FAR	Units	Net Revenue	Net Revenue per Unit
Reserved Housing				
Before Bonus	3.5	167	$12,426,000	$74,407
With Bonus	4.2	204	$18,896,000	$92,627
Change	**0.7**	**37**	**$6,470,000**	**$18,220**
Workforce Housing				
Before Bonus	3.5	167	-$5,797,000	-$34,713
With Bonus	7.0	343	$26,045,000	$75,933
Change	**3.5**	**176**	**$31,842,000**	**$110,646**