



Impact Fee Nexus & Economic Feasibility Study



Stakeholder Working Group
November 12, 2015

Urban
Economics



Oakland Impact Fee Stakeholder Working Group

November 12, 2015

INTRODUCTIONS

Agenda

- Introductions
- Follow Up From Last Week's Meeting
- Impact Fee Program Proposal – Key Components
- Impact Fee Program Proposal Discussion
 - Multi-family Housing
 - Office
- City Impact Fee Survey
- Wrap Up

Oakland Impact Fee Stakeholder Working Group

November 12, 2015

FOLLOW UP FROM LAST WEEK'S MEETING

Why Combine Facilities Into Single Capital Improvement Fee?

1. Implement capital projects sooner
2. More flexible use of fee revenues
3. Simplify fee schedule and program administration

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IMPACT FEE PROGRAM PROPOSAL KEY COMPONENTS

Impact Fee Program Proposal

Key Components

1. Land use types
2. Fee zones
3. Target fee levels
4. Phasing in fees
5. Allocation of fees among three types
(affordable housing, transportation, capital improvements)

Land Use Types

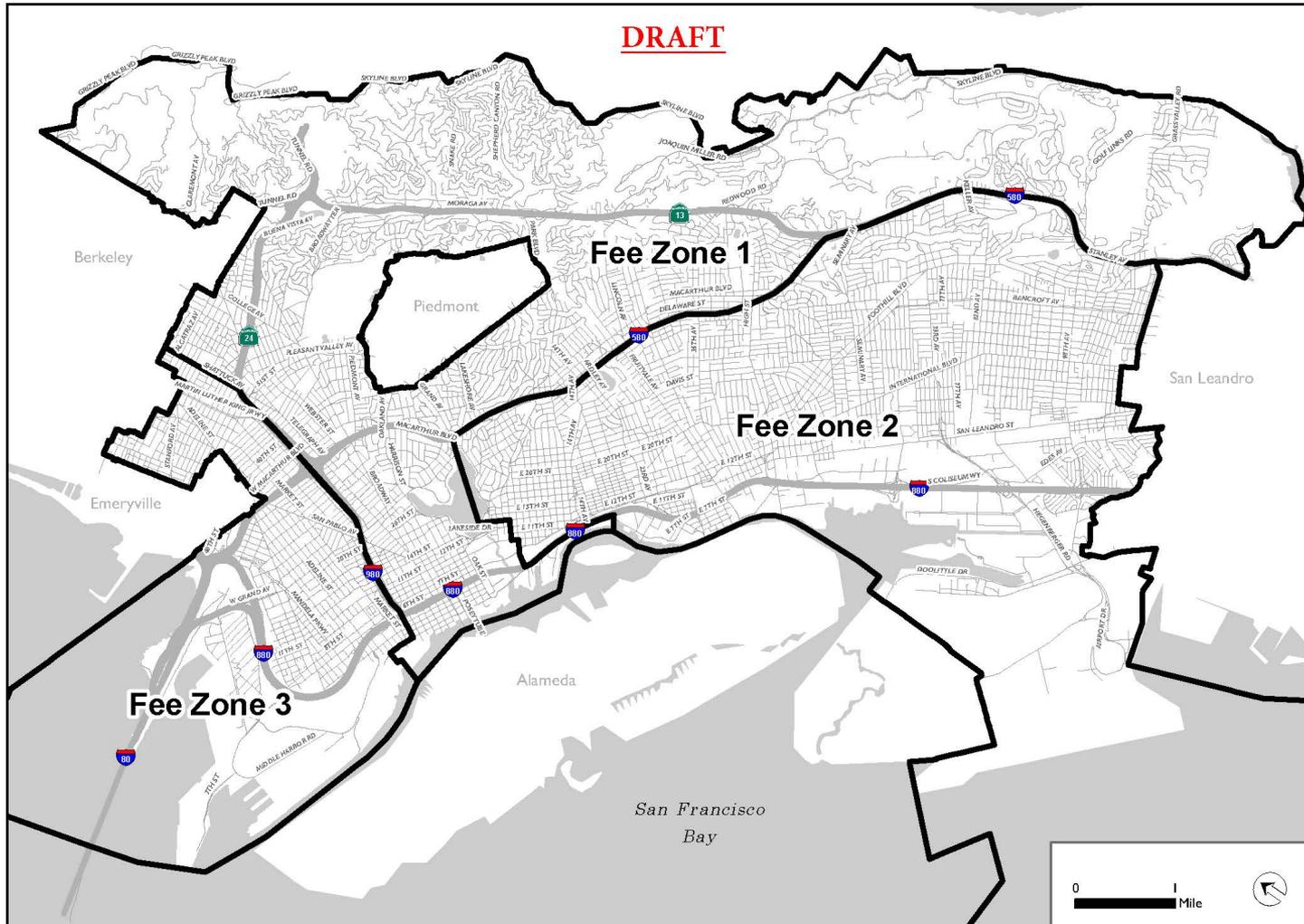
Residential

1. Single family detached
2. Townhome
3. Multi-family

Non-residential

1. Office
2. Retail/commercial
3. Industrial
4. Warehouse
5. Hotel/motel
6. Institutional

Impact Fee Zones



Draft Residential Development Impact Fee Zones

November 12, 2015

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MULTI-FAMILY IMPACT FEE PROGRAM PROPOSAL

Multi-Family Impact Fee For Fee Zone 1 Program Proposal

	Phase 1 July 1, 2016	Phase X July 1, 20XX	Target July 1, 20XX
Affordable Housing	?	?	?
Transportation	?	?	?
Capital Improvements	?	?	?
Total New Fees			\$20,000 per unit

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OFFICE IMPACT FEE PROGRAM PROPOSAL

Office Impact Fee Program Proposal

	Phase 1 July 1, 2016	Phase X July 1, 20??	Target July 1, 20??
Affordable Housing	<i>(Jobs-Housing Linkage Fee Already Adopted)</i>		
Transportation	?	?	?
Capital Improvements	?	?	?
Total New Fees			\$4.00 per sq. ft.

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CITY IMPACT FEE SURVEY

Multi-Family Rental Housing Development

CITY IMPACT FEE SURVEY

**Multi-Family Residential Rental Development:
Development Impact Fees and Comparable Charges, Oakland, Berkeley, Emeryville, and San Jose
as of September 25, 2015, with November 12, 2015 Oakland Proposal (shaded)**

FEE CATEGORY	FEE PER UNIT			
	Oakland (existing)	Berkeley	Emeryville	San Jose
Development Impact Fees				
Transportation ¹	-	-	1,555	-
Other Capital Facilities				
Capital Facilities ²	-	2,230	-	-
Sewer ^{3,4,5}	-	3,536	1,244	204
Sewer Treatment (EBMUD) ⁶	1,860	1,860	1,860	-
Water (EBMUD) ⁷	9,530	9,530	9,530	-
Fire	-	-	-	-
Police	-	-	-	-
Park and/or Park In-Lieu ⁸	-	-	3,602	\$6,800 - \$30,700
Library	-	-	-	-
Childcare	-	-	-	-
Subtotal Capital Facilities Fees	\$11,390	\$17,156	\$16,236	\$7,004 - \$30,904
Subtotal DIF (Transp. + Cap. Fac.)	\$11,390	\$17,156	\$17,791	\$7,004 - \$30,904
Affordable Housing Impact Fee^{9,10,11}	\$0	\$20,000	\$20,000	\$17,000
Non-Fees Similarly Applied				
Construction Taxes ¹²				\$9,394
Public Art In-Lieu ¹³	\$710	-	\$710	\$0
School Impact Fees	\$3,200	\$0	\$2,970	\$3,360
TOTAL PER UNIT	\$15,300	\$37,156	\$41,471	\$36,758 - \$60,658
City Proposed New Fee	\$20,000			
Proposed Total Per Unit	\$35,300	\$37,156	\$41,471	\$36,758 - \$60,658

NOTES:

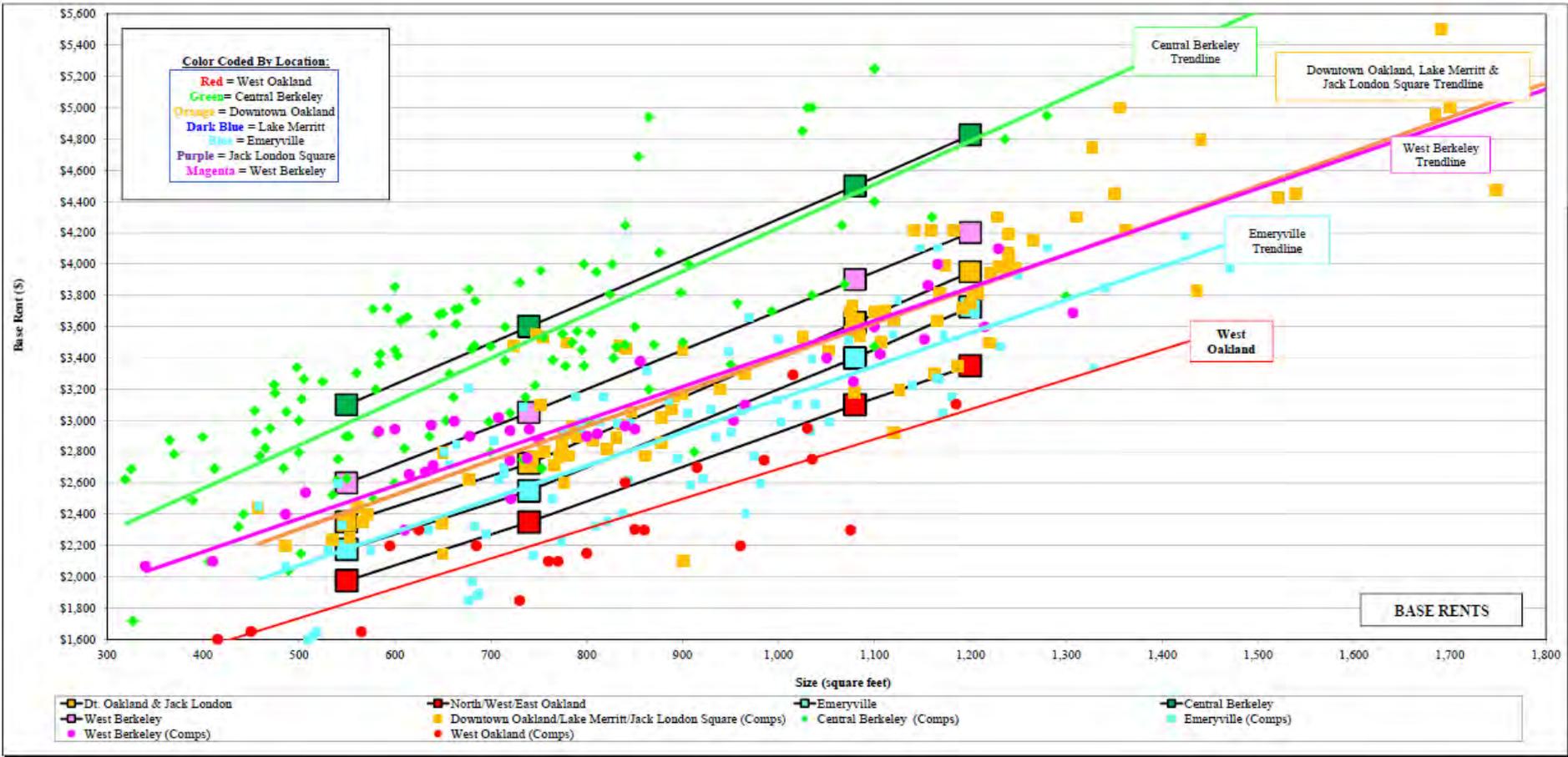
1. In Emeryville, a lower fee applies in the Transit Hub Overlay Zone. San Jose traffic impact fees only apply in North San Jose and Evergreen East/Hills. The fees are not estimated here.
2. In Berkeley, applicable only to area covered by the Downtown Streets and Open Space Improvement Plan; primarily transportation and open space/street medians.
3. Covers impacts to local sewer lines owned by the City of Berkeley. The sewer connection fee is \$3,536 per Equivalent Single-Family Dwelling Unit (last amended May 18, 2004, "Establish Sewer Connection Fees for Fiscal Years 2005-2009").
4. Covers impacts to local sewer lines owned by the City of Emeryville. The sewer connection fee is assessed per Single Family Dwelling Equivalent. Applies to all multi-family dwellings except units that contain two rooms or less or one bedroom or less. For this table, all units are assumed to have more than one bedroom and more than two rooms total.
5. The San Jose sewer connection fee for residential multifamily development is \$1,991 per acre plus \$194 per unit over 7 dwelling units per acre. The fee amount was calculated using the characteristics of a stacked flat prototype of 157 units at a density of 65 units per acre.
6. East Bay Municipal Utility District (EBMUD) provides wastewater treatment services for several East Bay cities, including Berkeley, Emeryville, and Oakland. EBMUD charges a one-time wastewater capacity fee for each new customer. The fee for a single family residence is \$1,860 per unit and for multi-family residences of 2-4 units, the fee is \$1,860 times the number of units. Larger multi-family residences are treated as non-residential uses. This analysis assumes the single-family unit charge for all residential units.
7. EBMUD assesses a System Capacity Charge for new water system connections in its service area to cover the cost of system-wide facilities buy-in, regional facilities buy-in, and future water supply. For multi-family premises the capacity charge is assessed per unit.
8. The City of San Jose park fees vary across 15 zones. The fees for multifamily housing of 5 or more units range from \$6,800 per unit up to \$30,700 per unit.
9. In Berkeley, applies to projects of 5 units or more. The fee was originally adopted in 2012 at \$28,000 per unit (or \$28 per sq. ft. assuming 1,000 sq. ft. units). The fee option was reduced to \$20,000 per unit in February 2013 to offer an incentive for payment of the fee. Developers had been opting to provide 10 percent of the units as affordable to very low income tenants instead of paying the fee to the Housing Trust Fund. (City of Berkeley Municipal Code Section 22.20.065) In July 2015, the City Council considered an updated *Affordable Housing Nexus Study* (draft March 25, 2015) and is reviewing a range of options for a revised Affordable Housing Mitigation Fee Program.
10. The current \$20,000 fee was adopted in July 2014. No development projects have proceeded since the adoption. On October 20, 2015, the City of Emeryville voted to increase the Affordable Housing Impact Fee on rental residential projects to \$28,000 in conjunction with a number of changes to regulations and development bonuses for multi-unit residential uses.
11. Implemented in November 2014. Applies citywide to market rate rental projects of 3 or more units, except in Downtown Highrise Incentive Area where projects that obtain certificates of occupancy prior to June 30, 2021 are exempt. There are also Pipeline Exemptions for projects that have pulled permits prior to June 30, 2016 and receive certificates of occupancy prior to January 31, 2020.
12. The City of San Jose collects the following "development taxes" (excise taxes) to fund specific City operations set forth in the Municipal Code: Commercial, Residential, Mobile Home Park Construction Tax (percent of building valuation), Building and Structure Construction Tax (percent of building valuation), Residential Construction Tax (per unit), and Construction Tax (per unit) Construction taxes based on building valuations calculated using RSMMeans Square Foot Costs, 36th Annual Edition, 2015 with San Jose, CA location factors applied.
13. Cities assessing a public art in-lieu fee assess the fee as a percentage of building value or cost, generally 1%. In Emeryville and Oakland, the in-lieu fee for housing is 0.5% of building cost for residential development. The amounts shown here are based on building cost estimates for Oakland prototypes and assume development of similar buildings in the other cities imposing the public art in-lieu fee. In San Jose, the public art program is associated with municipal projects and redevelopment projects only, per municipal code.

Source: Hausrath Economics Group

City Impact Fee Survey for Multi-Family Housing Development

- Impact fees in other cities are not indicative of level of fees feasible in Oakland
- Comparing East Bay Cities:
 - Much higher rents in Berkeley and greater ability to pay impact fees
 - Oakland still perceived as more risky for development than Berkeley and Emeryville

2015 Rent Comparisons for Mid-Rise Housing (H-4) Oakland, Berkeley, Emeryville



Figures in parentheses represent year built and occupancy rate, respectively.

City Impact Fee Survey for Multi-Family Housing Development (cont'd)

- East Bay comparison (cont'd)
 - New developments are not paying housing fee in Berkeley and Emeryville
 - Choosing less costly options
 - Affordable housing on-site to get density bonuses
 - No projects have moved forward in Emeryville since July 2014 fee adoption
 - Berkeley and Emeryville had inclusionary housing prior to housing impact fee
 - Market had already adjusted

City Impact Fee Survey for Multi-Family Housing Development (cont'd)

- Regarding San Jose:
 - Had inclusionary housing prior to adoption of impact fee for rental housing in Nov. 2014
 - Under new rental housing impact fee:
 - Pipeline projects exempt if get bldg. permits prior to 6-20-2016 and certificate of occupancy by 1-30-2020
 - No fees on Downtown high-rise rental development that obtain certificate of occupancy by 6-30-2021

Table 1
Current Rents for New Multi-Family Housing Development
in Oakland, Berkeley, and Emeryville

Mid-Rise Rental Apartments	Average Size	Average Rent per month	Rent per Sq. Ft per month
OAKLAND /a/			
– Downtown/Jack London/ Broadway Valdez/parts of North Oakland (Area 1)	825 sf	\$3,080	\$3.73
– West Oakland/East Oakland/parts of North Oakland (Area 2)	760 sf	\$2,530	\$3.33
BERKELEY /b/			
– Central Berkeley: Downtown and Campus Area (areas east of Sacramento St.)	760 - 825 sf	\$3,720 - 3,980	\$4.80 - 4.90
– West Berkeley: West of Sacramento St.	760 - 825 sf	\$3,200 - 3,390	\$4.10 - 4.20
EMERYVILLE /b/			
– Emeryville	760 - 825 sf	\$2,740 - 2,890	\$3.50 - 3.60

Note: Rents are identified for comparable mid-rise rental housing development in three Inner East Bay cities. The development prototypes are those identified for the economic feasibility analysis for Oakland's Impact Fee Study.

/a/ Hausrath Economics Group; rents in mid-2015 for mid-rise, residential development prototypes H-3 and H-4.

/b/ The Concord Group, October 2015; rents in Berkeley and Emeryville for comparable development to Oakland prototypes.

Office Development

CITY IMPACT FEE SURVEY

Office Development:**Development Impact Fees and Comparable Charges, Oakland, Berkeley, Emeryville, and San Jose
as of September 25, 2015, with November 12, 2015 Oakland Proposal (shaded)**

FEE CATEGORY	FEE PER BUILDING SQUARE FOOT			
	Oakland (existing)	Berkeley	Emeryville	San Jose
Development Impact Fees				
Transportation ¹	-	-	3.74	-
Other Capital Facilities				
Capital Facilities ²	-	1.68	-	-
Sewer ^{3,4,5}	-	0.66	0.23	0.10
Sewer Treatment (EBMUD) ⁶	0.35	0.35	0.35	-
Water (EBMUD) ⁷	0.77	0.77	0.77	-
Fire	-	-	-	-
Police	-	-	-	-
Park and/or Park In-Lieu	-	-	3.66	-
Library	-	-	-	-
Childcare	-	-	-	-
Subtotal Capital Facilities Fees	\$1.12	\$3.46	\$5.01	\$0.10
Subtotal DIF (Transp. + Cap. Fac.)	\$1.12	\$3.46	\$8.75	\$0.10
Comm'l Dev. Impact (Linkage) Fee	5.44	4.50	4.00	-
Non-Fees Similarly Applied				
Construction Taxes ⁸				\$9.74
Public Art In-Lieu¹⁰	\$1.91	\$0.00	\$1.91	\$0.00
School Impact Fees	\$0.51	\$0.00	\$0.47	\$0.54
TOTAL PER UNIT	\$8.98	\$7.96	\$15.13	\$10.38
City Proposed New Fee	\$4.00			
Proposed Total Per Square Foot	\$12.98	\$7.96	\$15.13	\$10.38

NOTES:

1. In Emeryville, a lower fee applies in the Transit Hub Overlay Zone. San Jose traffic impact fees only apply in North San Jose and Evergreen East/Hills. The fees are not estimated here.
2. In Berkeley, applicable only to area covered by the Downtown Streets and Open Space Improvement Plan; primarily transportation and open space/street medians.
3. Covers impacts to local sewer lines owned by the City of Berkeley. The sewer connection fee is \$3,536 per Equivalent Single-Family Dwelling Unit (last amended May 18, 2004, "Establish Sewer Connection Fees for Fiscal Years 2005-2009").
4. Covers impacts to local sewer lines owned by the City of Emeryville. The sewer connection fee is assessed per Single Family Dwelling Equivalent. Applies to all multi-family dwellings except units that contain two rooms or less or one bedroom or less. For this table, all units are assumed to have more than one bedroom and more than two rooms total.
5. The San Jose sewer connection fee for non-residential development is \$1,991 per acre for the first 10 acres plus \$861 per acre for each acre over 10 acres plus \$194 for each "living unit equivalent" over 7 units per acre. For office, a living unit equivalent is 2,000 square feet of building space. The fee amounts were calculated using the characteristics of a mid-rise (210,000 sq. ft.), lower/mid rise (140,000 sq. ft.), and high-rise (450,000 sq. ft.) office prototypes.
6. East Bay Municipal Utility District (EBMUD) provides wastewater treatment services for several East Bay cities, including Berkeley, Emeryville, and Oakland. EBMUD charges a one-time wastewater capacity fee for each new customer. The fee for a single family residence is \$1,860 per unit and for multi-family residences of 2-4 units, the fee is \$1,860 times the number of units. Larger multi-family residences are treated as non-residential uses. This analysis assumes the single-family unit charge for all residential units.
7. EBMUD assesses a System Capacity Charge for new water system connections in its service area to cover the cost of system-wide facilities buy-in, regional facilities buy-in, and future water supply. For multi-family premises the capacity charge is assessed per unit.
8. The City of San Jose collects the following "development taxes" (excise taxes) to fund specific City operations set forth in the Municipal Code: Commercial, Residential, Mobile Home Park Construction Tax (percent of building valuation), Building and Structure Construction Tax (percent of building valuation), Residential Construction Tax (per unit), and Construction Tax (per unit) Construction taxes based on building valuations calculated using RSMean Square Foot Costs, 36th Annual Edition, 2015 with San Jose, CA location factors applied.
10. Cities assessing a public art in-lieu fee assess the fee as a percentage of building value or cost, generally 1%. In Emeryville and Oakland, the in-lieu fee for housing is 0.5% of building cost for residential development. The amounts shown here are based on building cost estimates for Oakland prototypes and assume development of similar buildings in the other cities imposing the public art in-lieu fee. In San Jose, the public art program is associated with municipal projects and redevelopment projects only, per municipal code.

Source: Hausrath Economics Group

City Impact Fee Survey for Office Development

- Impact fees in other cities are not indicative of level of fees feasible in Oakland
- Comparing jobs/housing linkage fees:
 - Oakland, Berkeley, and Emeryville have such fees
 - San Jose does not

Oakland Impact Fee Stakeholder Working Group

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WRAP UP / QUESTIONS

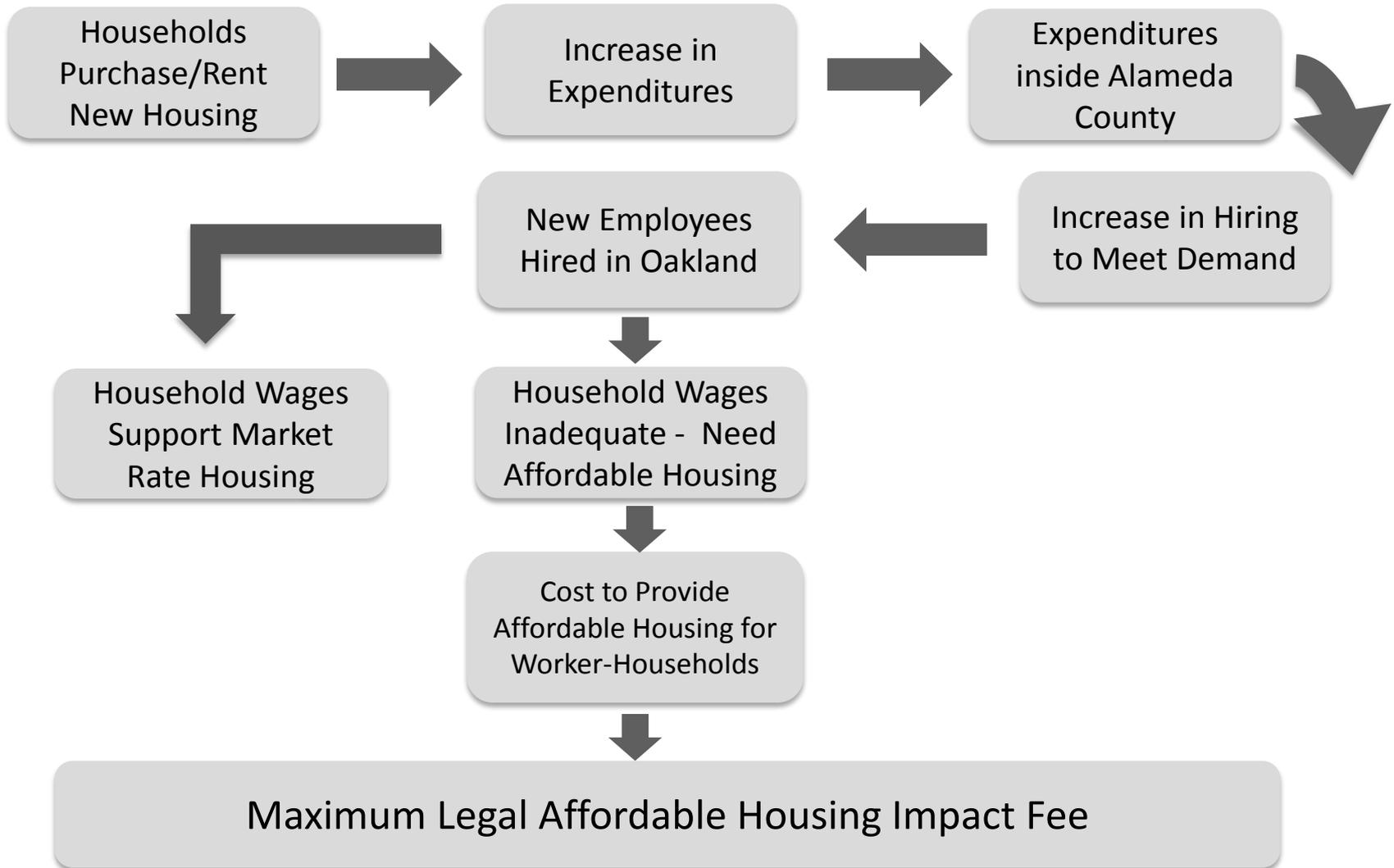
Oakland Impact Fee Nexus and Economic Feasibility Study

November 12, 2015

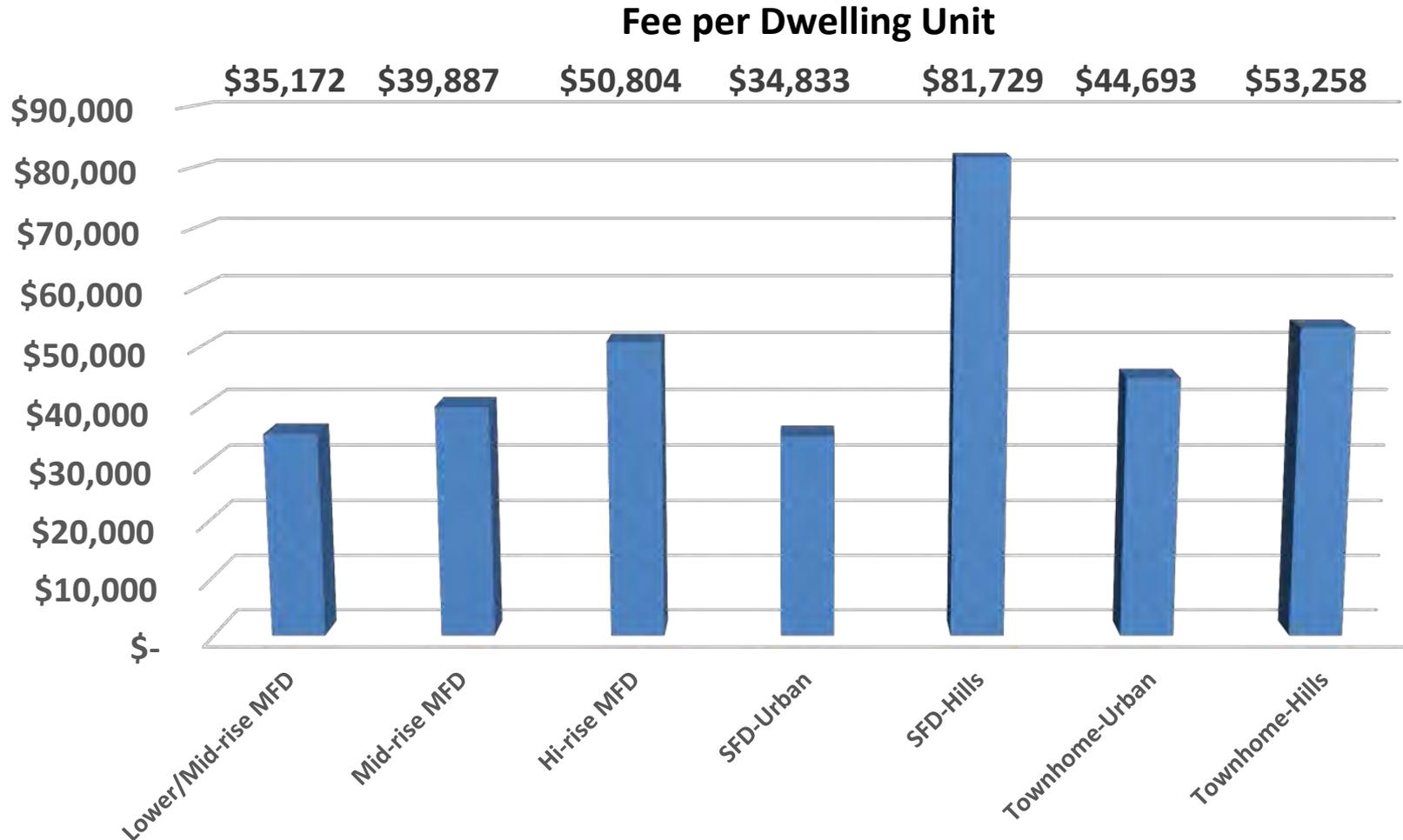
HOUSING IMPACT FEE NEXUS ANALYSIS

Methodology, Results, and Background Tables

Maximum Legal Affordable Housing Impact Fee Nexus Analysis



Maximum Legal Affordable Housing Impact Fee



Note: In urban areas such as Oakland, the economics of new housing development typically do not support the maximum legal fee amount.

Nexus Calculations for Market Rate Residential Development in Oakland

1. Define prototypes for new market rate residential development in Oakland

Seven prototypes for the City of Oakland spanning range of building types and market areas. Unit sizes and rents/sales prices are based on recent projects in Oakland.

- ♦ Four for-sale prototypes
 - H-1A - Single Family Detached in East Oakland
 - H-1B - Single Family Detached in North, South, and Lower Hills and Rockridge
 - H-2A - Townhomes / Row Houses in West Oakland
 - H-2B - Townhomes / Row Houses in North Hills and South Hills
 - ♦ Three rental prototypes
 - H-3 - Lower and Mid-Rise in West Oakland, North Oakland, and East Oakland
 - H-4 - Mid-Rise in Downtown, Jack London, Broadway/Valdez, and North Oakland
 - H-5 - High-Rise in Downtown, Jack London, and Broadway/Valdez
-

2. Estimate household income distribution of new market-rate owner and renter households in Oakland

Based on unit prices and rents and assumptions about the relationship between housing costs and household income

- ♦ Estimated household income for home buyers:
 - H-1A - Single Family Detached in East Oakland: \$97,000
 - H-1B - Single Family Detached in North, South, and Lower Hills and Rockridge: \$288,000
 - H-2A - Townhomes / Row Houses in West Oakland: \$120,000 - \$139,000
 - H-2B - Townhomes / Row Houses in North Hills and South Hills: \$155,000 - \$204,000
 - ♦ Estimated household income for renters:
 - H-3 - Lower and Mid-Rise in West Oakland, North Oakland, and East Oakland: \$60,000 - \$160,000
 - H-4 - Mid-Rise in Downtown, Jack London, Broadway/Valdez, and North Oakland: \$94,000 - \$176,000
 - H-5 - High-Rise in Downtown, Jack London, and Broadway/Valdez: \$108,000 - \$288,000
-

Nexus Calculations for Market Rate Residential Development in Oakland

3. Compute total consumer expenditures of buyer and renter households in Alameda County, based on household income characteristics of each prototype

This estimate comes from the IMPLAN3 model, which uses the Bureau of Labor Statistics' Consumer Expenditure Survey to distribute household income based on the spending patterns for nine different income groups. Before expenditures are calculated, adjustments are made to household incomes to account for payments to income taxes and savings.

4. Estimate the number of new jobs supported by the increase in spending on services and retail goods

The results of the IMPLAN3 model are specific to each prototype. The model generates an estimate of the number of jobs (direct and induced) associated with the spending of resident households in each prototype.

5. Estimate number of new jobs located in Oakland

Multiply total new jobs by 28%, the percentage of total Alameda County jobs located in Oakland (current and projected by ABAG).

6. Estimate the number of new households associated with job growth.

Divide the number of new jobs by the average number of workers per household with workers in City of Oakland (1.48 workers per household with workers according to the U.S. Census Bureau, 2009-2013, 5-Year American Community Survey.)

7. Estimate the household incomes of new worker households.

Multiply the average wage-earner's salary for each income category by 1.48 (average number of wage-earners in households with workers).

8. Estimate the number of new employee-households that are moderate-income or below whose affordable housing needs should be accommodated in Oakland

Group the new employee households by income category: very-low, low, moderate, and above-moderate income.

Subtract those employee households with incomes greater than \$95,370 (the income cut-off for a 2.5-person household earning 120% AMI or below) from the total number of new employee households.

9. Estimate the total housing affordability gap for new households requiring subsidies

Multiply the number of new households by income category (very low, low and moderate) by the average affordability gap for households in each income category.

Sum the aggregate affordability gap across the three income categories (very low, low and moderate).

10. Calculate maximum legal affordable housing impact fee per unit

Divide the total aggregate affordability gap for each prototype by the number of units in the prototype.

Relevant Characteristics of New Residential Development and New Resident Households

Table 1: Characteristics of For-Sale Prototypes

Table 2: Characteristics of Rental Prototypes

Table 3: Household Income Calculations for Prototype For-Sale Units

Table 4: Household Income Calculations for Prototype Rental Units

Table 5: Household Income Distribution Used in IMPLAN3 Analysis of For-Sale Prototypes

Table 6: Household Income Distribution Used in IMPLAN3 Analysis of Rental Prototypes

Affordability Gap Calculations and Maximum Legal Affordable Housing Impact Fee, By Prototype

Table 7: H-1A Single Family Detached Units Infill Locations (East Oakland)

Table 8: H-1B Single Family Detached Units Infill Locations (North/South/Lower Hills and Rockridge)

Table 9: H-2A Townhomes/Row Houses (West Oakland)

Table 10: H-2B Townhomes/Row Houses (North Hills/South Hills)

Table 11: H-3 Rental Apartments, Three to Four Floors over Podium (West, North, and East Oakland)

Table 12: H-4 Rental Apartments, Five to Six Floors over Podium (Downtown, Jack London, Broadway-Valdez, and North Oakland)

Table 13: H-5 Rental Apartments, High Rise (Downtown, Jack London, Broadway-Valdez)

Appendix A Tables - Background Information for Affordability Gap Analysis

Table A-1: Unit Types and Household Sizes Used in Housing Affordability Gap Analysis

Table A-2: Income Assumptions by Tenure Used in Housing Affordability Gap Analysis

Table A-3: City of Oakland Income Limits

Table A-4: Rental Housing Affordability Calculations by Income Level and Unit Type

Table A-5: Affordable Sales Prices by Income Level and Unit Type

Table A-6: Unit Types, Size, and Costs Used in Housing Affordability Gap Analysis

Table A-7: Rental Housing Affordability Gap Calculation

Table A-8: For-Sale Housing Affordability Gap Calculation

Table A-9: Average Rental and For-Sale Housing Affordability Gap by Income Group

Table 1
Characteristics of For-Sale Prototypes

Housing Type and Location	Percentage by Unit Type / Size	Bedrooms/ Bathrooms	Size	Sales Prices
H-1 Single Family Detached (East Oakland)				
	100%	3 BR/3 BA	1,600	\$405,000
H-1 Single Family Detached (North, South, Lower Hills, Rockridge)				
	100%	4 BR/3 BA	3,000	\$1,240,000
H-2 Townhomes / Row Houses (West Oakland)				
	25%	2 BR 2 BA	1,185	\$490,000
	65%	2 BR 2.5 BA	1,370	\$520,000
	10%	3 BR 3 BA	1,550	\$575,000
H-2 Townhomes / Row Houses (North Hills, South Hills)				
	10%	2 BR 2.5 BA	1,500	\$630,000
	10%	3 BR 3 BA	1,750	\$740,000
	30%	3 BR 3 BA	2,050	\$775,000
	35%	3+ BR 3 BA	2,200	\$800,000
	15%	4 BR 3 BA	2,500	\$850,000

Source: Hausrath Economics Group

Table 2
Characteristics of Rental Prototypes

Housing Type and Location	Percentage by Unit Type / Size	Bedrooms/ Bathrooms	Size	Rents
H-3 Lower- and Mid-Rise (West, North, East Oakland)¹				
	15%	Studio	400	\$1,500
	45%	1 BR 1 BA	700	\$2,350
	32%	2 BR 2 BA	900	\$2,900
	8%	3 BR 2 BA	1,200	\$4,000
H-4 Mid-Rise (Downtown, Jack London, Broadway/Valdez, North Oakland)¹				
	17%	Studio	550	\$2,350
	50%	1 BR 1 BA	740	\$2,750
	30%	2 BR 2 BA	1,080	\$3,900
	3%	2+ BR 2 BA	1,200	\$4,400
H-5 High-Rise (Downtown, Jack London, Broadway/Valdez)				
	24%	Studio	550	\$2,700
	50%	1 BR 1 BA	840	\$3,700
	25%	2 BR 2 BA	1,100	\$5,200
	1%	3 BR Penthouse	1,800	\$7,200

1. North Oakland is large and includes several different areas which serve different markets. H-3 is occurring in the parts of North Oakland near Emeryville and West Oakland. The H-4 development is being planned in Rockridge and at 51st and Broadway for a higher rent/higher price consumer.

Source: Hausrath Economics Group

Table 3

Household Income Calculations for Prototype For-Sale Units

	Single Family Detached		Townhomes / Row Houses							
	East Oakland	North, South, Lower Hills, Rockridge	West Oakland			North Hills, South Hills				
Unit Type	3 BR/3BA	4 BR/3BA	2 BR 2 BA	2 BR 2.5 BA	3 BR 3 BA	2 BR 2.5 BA	3 BR 3 BA	3 BR 3 BA	3+ BR 3 BA	4 BR 3 BA
Sales Prices	\$405,000	\$1,240,000	\$490,000	\$520,000	\$575,000	\$630,000	\$740,000	\$775,000	\$800,000	\$850,000
Down Payment ¹	\$81,000	\$248,000	\$98,000	\$104,000	\$115,000	\$126,000	\$148,000	\$155,000	\$160,000	\$170,000
Loan Amount	\$324,000	\$992,000	\$392,000	\$416,000	\$460,000	\$504,000	\$592,000	\$620,000	\$640,000	\$680,000
Monthly Debt Service ²	\$1,570	\$4,594	\$1,900	\$2,016	\$2,229	\$2,443	\$2,869	\$3,005	\$3,102	\$3,296
Annual Debt Service	\$18,843	\$55,129	\$22,798	\$24,194	\$26,753	\$29,312	\$34,430	\$36,058	\$37,221	\$39,547
Annual Property Taxes ³	\$4,788	\$14,658	\$5,792	\$6,147	\$6,797	\$7,447	\$8,748	\$9,161	\$9,457	\$10,048
Annual Maintenance Costs ⁴	\$4,050	\$12,400	\$5,750	\$5,900	\$6,175	\$7,650	\$8,200	\$8,375	\$8,500	\$8,750
Fire and Hazard Insurance ⁵	\$1,418	\$4,340	\$1,715	\$1,820	\$2,013	\$2,205	\$2,590	\$2,713	\$2,800	\$2,975
Annual Costs	\$29,098	\$86,527	\$36,055	\$38,061	\$41,737	\$46,614	\$53,967	\$56,307	\$57,978	\$61,320
Household Income⁶	\$96,994	\$288,424	\$120,184	\$126,869	\$139,124	\$155,379	\$179,890	\$187,689	\$193,260	\$204,401

1. 20% downpayment assumed. This analysis undertakes ownership calculations for two groups of buyers – market rate buyers and very low- to moderate-income buyers. Calculations for these two groups are predicated on slightly different assumptions. The percentage of the downpayment is one of those differences. Market rate buyers are assumed to finance 80% of the sales prices, and very low- to moderate-income buyers are assumed to finance 95% of the sales prices.

2. 30-year loan at 4.125% annual interest rate for all for-sale prototypes except single family homes in the Hills/Rockridge areas – for which a lower Jumbo loan rate of 3.750% applies. (August 21, 2015 Wells Fargo Website - FNMA Loan <https://www.wellsfargo.com/mortgage/rates/>)

3. 1.35% of sales price (based on the average property tax rate across all tax rate areas in the City of Oakland).

4. Annual maintenance and repair allowance estimated at 1% of sales price.

5. Annual fire and hazard insurance estimated at 0.35% of sales price.

6. Assumes 30% of gross annual household income allocated to housing costs.

Sources: Hausrath Economics Group and Vernazza Wolfe Associates Inc.

Table 4
Household Income Calculations for Prototype Rental Units

Lower- and Mid-Rise (West, North, East Oakland)				
Unit Type	Studio	1 BR 1 BA	2 BR 2 BA	3 BR 2 BA
Average Monthly Rent	\$1,500	\$2,350	\$2,900	\$4,000
Annual Housing Cost	\$18,000	\$28,200	\$34,800	\$48,000
Estimated Average Annual Household Income¹	\$60,000	\$94,000	\$116,000	\$160,000
Mid-Rise (Downtown, Jack London, Broadway/Valdez, North Oakland)				
Unit Type	Studio	1 BR 1 BA	2 BR 2 BA	2+ BR 2 BA
Average Monthly Rent	\$2,350	\$2,750	\$3,900	\$4,400
Annual Housing Cost	\$28,200	\$33,000	\$46,800	\$52,800
Estimated Average Annual Household Income¹	\$94,000	\$110,000	\$156,000	\$176,000
High-Rise (Downtown, Jack London, Broadway/Valdez)				
Unit Type	Studio	1 BR 1 BA	2 BR 2 BA	3 BR Penthouse
Average Monthly Rent	\$2,700	\$3,700	\$5,200	\$7,200
Annual Housing Cost	\$32,400	\$44,400	\$62,400	\$86,400
Estimated Average Annual Household Income¹	\$108,000	\$148,000	\$208,000	\$288,000

1. Assumes 30% of gross annual household income allocated to rent.

Sources: Hausrath Economics Group and Vernazza Wolfe Associates Inc.

Table 5
Household Income Distribution Used in IMPLAN3 Analysis of For-Sale Prototypes

	Single Family Detached		Townhomes / Row Houses	
	East Oakland	North, South, Lower Hills, Rockridge	West Oakland	North Hills, South Hills
Household Income Level	Distribution of Households by Income Level			
Less than \$10,000	0%	0%	0%	0%
\$10,000-\$15,000	0%	0%	0%	0%
\$15,000-\$25,000	0%	0%	0%	0%
\$25,000-\$35,000	0%	0%	0%	0%
\$35,000-\$50,000	0%	0%	0%	0%
\$50,000-\$75,000	0%	0%	0%	0%
\$75,000-\$100,000	100%	0%	0%	0%
\$100,000-\$150,000	0%	0%	100%	0%
Over \$150,000	0%	100%	0%	100%
Total	100%	100%	100%	100%

Sources: Vernazza Wolfe Associates Inc. and Hausrath Economics Group

Table 6
Household Income Distribution Used in IMPLAN3 Analysis of Rental Prototypes

	Lower- and Mid-Rise	Mid-Rise	High-Rise
	West, North, East Oakland	Downtown, Jack London, Broadway Valdez, North Oakland	Downtown, Jack London, Broadway/Valdez
Household Income Level	Distribution of Households by Income Level		
Less than \$10,000	0%	0%	0%
\$10,000-\$15,000	0%	0%	0%
\$15,000-\$25,000	0%	0%	0%
\$25,000-\$35,000	0%	0%	0%
\$35,000-\$50,000	0%	0%	0%
\$50,000-\$75,000	15%	0%	0%
\$75,000-\$100,000	45%	17%	0%
\$100,000-\$150,000	32%	50%	74%
Over \$150,000	8%	33%	26%
Total	100%	100%	100%

Sources: Vernazza Wolfe Associates Inc. and Hausrath Economics Group

Table 7
H-1A Single Family Detached Units Infill Locations (East Oakland)
Affordability Gap Calculation and Maximum Legal Affordable Housing Impact Fee

Income Category	Total Induced Jobs per Prototype ¹	Jobs Accommodated in Oakland ²	Oakland Households ³	Average Worker Income ⁴	Household Income ⁵	Demand from New Very Low-, Low- and Moderate income Households	Affordability Group ⁶	Total Affordability Gap ⁷	Maximum Legal Affordable Housing Impact Fee per Unit ⁸
Less than \$10,000	0.00	0	n/a	\$0	\$0				
\$10,000-\$15,000	0.00	0	n/a	\$0	\$0				
\$15,000-\$25,000	2.28	0.64	0.43	\$23,778	\$35,191	0.43	Very Low-Income	\$182,233	
\$25,000-\$35,000	1.84	0.52	0.35	\$29,501	\$43,661	0.35	Low-Income	\$132,580	
\$35,000-\$50,000	6.71	1.88	1.27	\$44,218	\$65,442	1.27	Moderate-Income	\$278,673	
\$50,000-\$75,000	2.49	0.70	0.47	\$58,405	\$86,440	0.47	Moderate-Income	\$103,167	
\$75,000-\$100,000	1.20	0.34	0.23	\$87,463	\$129,445				
\$100,000-\$150,000	2.51	0.70	0.48	\$115,656	\$171,171				
Over \$150,000	0.00	0.00	0	n/a	\$0				
Total	17.03	4.77	3.22	\$55,549		2.52		\$696,653	\$34,833

Assumptions:

20	number of units in prototype
28%	percent of Alameda County jobs located in Oakland (current and projected by ABAG)
1.48	number of wage earners per household, City of Oakland (2009 - 2013 American Community Survey, 5-Year Estimates)

Notes:

1. Results of IMPLAN3 input-output model
2. Total induced jobs multiplied by the percent of Alameda County jobs located in Oakland
3. Jobs in Oakland divided by wage earners per household with workers
4. Results of IMPLAN3 input-output model and analysis of data from the California Labor Market Information Division
5. Average worker income multiplied by the number of wage earners in households with workers
6. Based on City of Oakland household income threshold incomes for an average size household of 2.5 persons: Very Low Income (\$39,525), Low Income (\$63,580), and Moderate Income (\$95,370)
7. Number of households multiplied by average affordability gap for applicable income group (see Appendix Table A-1 - A-9 for background on the affordability gap analysis)
8. Total affordability gap divided by number of new units in the prototype

Source: Vernazza Wolfe Associates, Inc. and ADE, Inc.

Table 8
H-1B Single Family Detached Units Infill Locations (North/South/Lower Hills and Rockridge)
Affordability Gap Calculation and Maximum Legal Affordable Housing Impact Fee

Income Category	Total Induced Jobs per Prototype ¹	Jobs Accommodated in Oakland ²	Oakland Households ³	Average Worker Income ⁴	Household Income ⁵	Demand from New Very Low-, Low- and Moderate income Households	Affordability Group ⁶	Total Affordability Gap ⁷	Maximum Legal Affordable Housing Impact Fee per Unit ⁸
Less than \$10,000	0.00	0	n/a	\$0	\$0				
\$10,000-\$15,000	0.00	0	n/a	\$0	\$0				
\$15,000-\$25,000	24.60	6.89	4.65	\$23,778	\$35,191	4.65	Very Low-Income	\$1,968,197	
\$25,000-\$35,000	21.17	5.93	4.00	\$29,551	\$43,736	4.00	Low-Income	\$1,523,885	
\$35,000-\$50,000	80.05	22.41	15.14	\$44,246	\$65,485	15.14	Moderate-Income	\$3,322,789	
\$50,000-\$75,000	32.72	9.16	6.19	\$58,545	\$86,647	6.19	Moderate-Income	\$1,358,061	
\$75,000-\$100,000	15.68	4.39	2.97	\$87,643	\$129,711				
\$100,000-\$150,000	29.13	8.16	5.51	\$115,861	\$171,474				
Over \$150,000	0.00	0	0	n/a	\$0				
Total	203.34	56.94	38.47	\$56,147		29.99		\$8,172,932	\$81,729

Assumptions:

100	number of units in prototype
28%	percent of Alameda County jobs located in Oakland (current and projected by ABAG)
1.48	number of wage earners per household, City of Oakland (2009 - 2013 American Community Survey, 5-Year Estimates)

Notes:

- Results of IMPLAN3 input-output model
- Total induced jobs multiplied by the percent of Alameda County jobs located in Oakland
- Jobs in Oakland divided by wage earners per household with workers
- Results of IMPLAN3 input-output model and analysis of data from the California Labor Market Information Division
- Average worker income multiplied by the number of wage earners in households with workers
- Based on City of Oakland household income threshold incomes for an average size household of 2.5 persons: Very Low Income (\$39,525), Low Income (\$63,580), and Moderate Income (\$95,370)
- Number of households multiplied by average affordability gap for applicable income group (see Appendix Table A-1 - A-9 for background on the affordability gap analysis)
- Total affordability gap divided by number of new units in the prototype

Source: Vernazza Wolfe Associates, Inc. and ADE, Inc.

Table 9
H-2A Townhomes/Row Houses (West Oakland)
Affordability Gap Calculation and Maximum Legal Affordable Housing Impact Fee

Income Category	Total Induced Jobs per Prototype ¹	Jobs Accommodated in Oakland ²	Oakland Households ³	Average Worker Income ⁴	Household Income ⁵	Demand from New Very Low-, Low- and Moderate income Households	Affordability Group ⁶	Total Affordability Gap ⁷	Maximum Legal Affordable Housing Impact Fee per Unit ⁸
Less than \$10,000	0.00	0	n/a	\$0	\$0				
\$10,000-\$15,000	0.00	0	n/a	\$0	\$0				
\$15,000-\$25,000	4.31	1.21	0.82	\$23,778	\$35,191	0.82	Very Low-Income	\$344,968	
\$25,000-\$35,000	3.51	0.98	0.66	\$29,499	\$43,659	0.66	Low-Income	\$252,663	
\$35,000-\$50,000	13.03	3.65	2.47	\$44,237	\$65,471	2.47	Moderate-Income	\$541,004	
\$50,000-\$75,000	4.87	1.36	0.92	\$58,451	\$86,507	0.92	Moderate-Income	\$202,167	
\$75,000-\$100,000	2.35	0.66	0.44	\$87,482	\$129,473				
\$100,000-\$150,000	4.78	1.34	0.90	\$115,662	\$171,180				
Over \$150,000	0.00	0.00	0	n/a	\$0				
Total	32.86	9.20	6.22	\$55,575		4.87		\$1,340,802	\$44,693

Assumptions:

30	number of units in prototype
28%	percent of Alameda County jobs located in Oakland (current and projected by ABAG)
1.48	number of wage earners per household, City of Oakland (2009 - 2013 American Community Survey, 5-Year Estimates)

Notes:

- Results of IMPLAN3 input-output model
- Total induced jobs multiplied by the percent of Alameda County jobs located in Oakland
- Jobs in Oakland divided by wage earners per household with workers
- Results of IMPLAN3 input-output model and analysis of data from the California Labor Market Information Division
- Average worker income multiplied by the number of wage earners in households with workers
- Based on City of Oakland household income threshold incomes for an average size household of 2.5 persons: Very Low Income (\$39,525), Low Income (\$63,580), and Moderate Income (\$95,370)
- Number of households multiplied by average affordability gap for applicable income group (see Appendix Table A-1 - A-9 for background on the affordability gap analysis)
- Total affordability gap divided by number of new units in the prototype

Source: Vernazza Wolfe Associates, Inc. and ADE, Inc.

Table 10
H-2B Townhomes/Row Houses (North Hills/South Hills)
Affordability Gap Calculation and Maximum Legal Affordable Housing Impact Fee

Income Category	Total Induced Jobs per Prototype ¹	Jobs Accommodated in Oakland ²	Oakland Households ³	Average Worker Income ⁴	Household Income ⁵	Demand from New Very Low-, Low- and Moderate income Households	Affordability Group ⁶	Total Affordability Gap ⁷	Maximum Legal Affordable Housing Impact Fee per Unit ⁸
Less than \$10,000	0.00	0	n/a	\$0	\$0				
\$10,000-\$15,000	0.00	0	n/a	\$0	\$0				
\$15,000-\$25,000	4.81	1.35	0.91	\$23,778	\$35,191	0.91	Very Low-Income	\$384,767	
\$25,000-\$35,000	4.14	1.16	0.78	\$29,551	\$43,736	0.78	Low-Income	\$297,908	
\$35,000-\$50,000	15.65	4.38	2.96	\$44,246	\$65,485	2.96	Moderate-Income	\$649,579	
\$50,000-\$75,000	6.40	1.79	1.21	\$58,545	\$86,647	1.21	Moderate-Income	\$265,490	
\$75,000-\$100,000	3.06	0.86	0.58	\$87,643	\$129,711				
\$100,000-\$150,000	5.70	1.59	1.08	\$115,861	\$171,474				
Over \$150,000	0.00	0.00	0	n/a	\$0				
Total	39.75	11.13	7.52	\$56,147		5.86		\$1,597,744	\$53,258

Assumptions:

30	number of units in prototype
28%	percent of Alameda County jobs located in Oakland (current and projected by ABAG)
1.48	number of wage earners per household, City of Oakland (2009 - 2013 American Community Survey, 5-Year Estimates)

Notes:

1. Results of IMPLAN3 input-output model
2. Total induced jobs multiplied by the percent of Alameda County jobs located in Oakland
3. Jobs in Oakland divided by wage earners per household with workers
4. Results of IMPLAN3 input-output model and analysis of data from the California Labor Market Information Division
5. Average worker income multiplied by the number of wage earners in households with workers
6. Based on City of Oakland household income threshold incomes for an average size household of 2.5 persons: Very Low Income (\$39,525), Low Income (\$63,580), and Moderate Income (\$95,370)
7. Number of households multiplied by average affordability gap for applicable income group (see Appendix Table A-1 - A-9 for background on the affordability gap analysis)
8. Total affordability gap divided by number of new units in the prototype

Source: Vernazza Wolfe Associates, Inc. and ADE, Inc.

Table 11
H-3 Rental Apartments, Three to Four Floors over Podium (West, North, and East Oakland)
Affordability Gap Calculation and Maximum Legal Affordable Housing Impact Fee

Income Category	Total Induced Jobs per Prototype ¹	Jobs Accommodated in Oakland ²	Oakland Households ³	Average Worker Income ⁴	Household Income ⁵	Demand from New Very Low-, Low- and Moderate income Households	Affordability Group ⁶	Total Affordability Gap ⁷	Maximum Legal Affordable Housing Impact Fee per Unit ⁸
Less than \$10,000	0	0	n/a	n/a	n/a	n/a			
\$10,000-\$15,000	0	0	n/a	n/a	n/a	n/a			
\$15,000-\$25,000	13.56	3.80	2.57	\$23,778	\$35,191	2.57	Very Low-Income	\$1,085,142	
\$25,000-\$35,000	11.11	3.11	2.10	\$29,506	\$43,668	2.10	Low-Income	\$799,723	
\$35,000-\$50,000	40.93	11.46	7.74	\$44,229	\$65,459	7.74	Moderate-Income	\$1,699,195	
\$50,000-\$75,000	15.34	4.29	2.90	\$58,434	\$86,482	2.90	Moderate-Income	\$636,590	
\$75,000-\$100,000	7.40	2.07	1.40	\$87,486	\$129,479	0.00			
\$100,000-\$150,000	15.16	4.24	2.87	\$115,683	\$171,211	0.00			
Over \$150,000	0	0	0	n/a	\$0	0.00			
Total	103.50	28.98	19.58	\$55,631	\$0	15.31		\$4,220,650	\$35,172

Assumptions:

120	number of units in prototype
28%	percent of Alameda County jobs located in Oakland (current and projected by ABAG)
1.48	number of wage earners per household, City of Oakland (2009 - 2013 American Community Survey, 5-Year Estimates)

Notes:

1. Results of IMPLAN3 input-output model
2. Total induced jobs multiplied by the percent of Alameda County jobs located in Oakland
3. Jobs in Oakland divided by wage earners per household with workers
4. Results of IMPLAN3 input-output model and analysis of data from the California Labor Market Information Division
5. Average worker income multiplied by the number of wage earners in households with workers
6. Based on City of Oakland household income threshold incomes for an average size household of 2.5 persons: Very Low Income (\$39,525), Low Income (\$63,580), and Moderate Income (\$95,370)
7. Number of households multiplied by average affordability gap for applicable income group (see Appendix Table A-1 - A-9 for background on the affordability gap analysis)
8. Total affordability gap divided by number of new units in the prototype

Source: Vernazza Wolfe Associates, Inc. and ADE, Inc.

Table 12
H-4 Rental Apartments, Five to Six Floors over Podium (Downtown, Jack London, Broadway-Valdez, and North Oakland)
Affordability Gap Calculation and Maximum Legal Affordable Housing Impact Fee

Income Category	Total Induced Jobs per Prototype ¹	Jobs Accommodated in Oakland ²	Oakland Households ³	Average Worker Income ⁴	Household Income ⁵	Demand from New Very Low-, Low- and Moderate income Households	Affordability Group ⁶	Total Affordability Gap ⁷	Maximum Legal Affordable Housing Impact Fee per Unit ⁸
Less than \$10,000	0	0	n/a	\$0	\$0				
\$10,000-\$15,000	0	0	n/a	\$0	\$0				
\$15,000-\$25,000	22.60	6.33	4.28	\$23,778	\$35,191	4.28	Very Low-Income	\$1,808,313	
\$25,000-\$35,000	18.75	5.25	3.55	\$29,518	\$43,687	3.55	Low-Income	\$1,349,672	
\$35,000-\$50,000	69.90	19.57	13.22	\$44,238	\$65,472	13.22	Moderate-Income	\$2,901,407	
\$50,000-\$75,000	26.99	7.56	5.11	\$58,481	\$86,552	5.11	Moderate-Income	\$1,120,304	
\$75,000-\$100,000	12.99	3.64	2.46	\$87,542	\$129,562				
\$100,000-\$150,000	25.64	7.18	4.85	\$115,734	\$171,287				
Over \$150,000	0	0	0	n/a	\$0				
Total	176.87	49.52	33.46	\$55,783		26.15		\$7,179,696	\$39,887

Assumptions:

180	number of units in prototype
28%	percent of Alameda County jobs located in Oakland (current and projected by ABAG)
1.48	number of wage earners per household, City of Oakland (2009 - 2013 American Community Survey, 5-Year Estimates)

Notes:

1. Results of IMPLAN3 input-output model
2. Total induced jobs multiplied by the percent of Alameda County jobs located in Oakland
3. Jobs in Oakland divided by wage earners per household with workers
4. Results of IMPLAN3 input-output model and analysis of data from the California Labor Market Information Division
5. Average worker income multiplied by the number of wage earners in households with workers
6. Based on City of Oakland household income threshold incomes for an average size household of 2.5 persons: Very Low Income (\$39,525), Low Income (\$63,580), and Moderate Income (\$95,370)
7. Number of households multiplied by average affordability gap for applicable income group (see Appendix Table A-1 - A-9 for background on the affordability gap analysis)
8. Total affordability gap divided by number of new units in the prototype

Source: Vernazza Wolfe Associates, Inc. and ADE, Inc.

Table 13
H-5 Rental Apartments, High Rise (Downtown, Jack London, and Broadway-Valdez)
Affordability Gap Calculation and Maximum Legal Affordable Housing Impact Fee

Income Category	Total Induced Jobs per Prototype ¹	Jobs Accommodated in Oakland ²	Oakland Households ³	Average Worker Income ⁴	Household Income ⁵	Demand from New Very Low-, Low- and Moderate income Households	Affordability Group ⁶	Total Affordability Gap ⁷	Maximum Legal Affordable Housing Impact Fee per Unit ⁸
Less than \$10,000	0	0	n/a	\$0	\$0				
\$10,000-\$15,000	0	0	n/a	\$0	\$0				
\$15,000-\$25,000	35.24	9.87	6.67	\$23,778	\$35,191	6.67	Very Low-Income	\$2,819,597	
\$25,000-\$35,000	29.16	8.17	5.52	\$29,515	\$43,682	5.52	Low-Income	\$2,099,444	
\$35,000-\$50,000	108.90	30.49	20.60	\$44,240	\$65,475	20.60	Moderate-Income	\$4,520,272	
\$50,000-\$75,000	41.86	11.72	7.92	\$58,481	\$86,552	7.92	Moderate-Income	\$1,737,654	
\$75,000-\$100,000	20.15	5.64	3.81	\$87,534	\$129,550				
\$100,000-\$150,000	39.86	11.16	7.54	\$115,723	\$171,270				
Over \$150,000	0	0	0	n/a	\$0				
Total	275.18	77.05	52.06	\$55,751		40.71		\$11,176,967	\$50,804

Assumptions:

220	number of units in prototype
28%	percent of Alameda County jobs located in Oakland (current and projected by ABAG)
1.48	number of wage earners per household, City of Oakland (2009 - 2013 American Community Survey, 5-Year Estimates)

Notes:

1. Results of IMPLAN3 input-output model
2. Total induced jobs multiplied by the percent of Alameda County jobs located in Oakland
3. Jobs in Oakland divided by wage earners per household with workers
4. Results of IMPLAN3 input-output model and analysis of data from the California Labor Market Information Division
5. Average worker income multiplied by the number of wage earners in households with workers
6. Based on City of Oakland household income threshold incomes for an average size household of 2.5 persons: Very Low Income (\$39,525), Low Income (\$63,580), and Moderate Income (\$95,370)
7. Number of households multiplied by average affordability gap for applicable income group (see Appendix Table A-1 - A-9 for background on the affordability gap analysis)
8. Total affordability gap divided by number of new units in the prototype

Source: Vernazza Wolfe Associates, Inc. and ADE, Inc.

Table A-1

Unit Types and Household Sizes Used in Housing Affordability Gap Analysis

Unit Type	Rental Household Size	Ownership Household Size
Studio	1 person	NA
1-bedroom	2 person	1.5 person
2-bedroom	3 person	3 person
3- bedroom	4 person	4 person
4- bedroom	5 person	5 person

Source: Vernazza Wolfe Associates Inc.

Table A-2
Income Assumptions by Tenure Used in Affordability Gap Analysis

Income Category	Maximum Income by Category as a Percent of Area Median Income ¹
Rental Housing	
Extremely Low-Income	30%
Very Low-Income	50%
Low-Income	60%
Moderate-Income	110%
Ownership Housing	
Very Low-Income	50%
Low-Income	70%
Moderate-Income	110%

1. Area median income for the City of Oakland

Source: Vernazza Wolfe Associates Inc.

Table A-3
City of Oakland Income Limits

Income Category	Number of Persons in Household					
	1	1.5	2	3	4	5
Rental Housing						
Extremely Low Income (30% AMI)	\$19,500	NA	\$22,300	\$25,100	\$27,850	\$30,100
Very Low Income (50% AMI)	\$32,550	NA	\$37,200	\$41,850	\$46,450	\$50,200
Low Income (60% AMI)	\$39,060	NA	\$44,640	\$50,220	\$55,740	\$60,240
Moderate Income (110% AMI)	\$71,995	NA	\$82,280	\$92,565	\$102,850	\$111,100
Ownership Housing						
Very Low Income (50% AMI)	\$32,550	\$34,875	\$37,200	\$41,850	\$46,450	\$50,200
Low Income (70% AMI)	\$44,610	\$47,790	\$50,970	\$57,340	\$63,670	\$68,800
Moderate Income (110% AMI)	\$71,995	\$77,138	\$82,280	\$92,565	\$102,850	\$111,100

Note: 30%, 50%, 60%, and 70% of AMI income limits provided by the City of Oakland based on the 2015 HOME Income Limits. 110% of AMI calculated based on median household incomes provided by the City of Oakland.

Sources: City of Oakland; Vernazza Wolfe Associates, Inc., 2015.

Table A-4
Rental Housing Affordability Calculations by Income Level and Unit Type

	Studio	1 BR	2 BR	3 BR	4 BR
Household Size (Persons per HH)	1	2	3	4	5
Extremely Low (30% AMI)					
Maximum Household Income at 30% AMI	\$19,500	\$22,300	\$25,100	\$27,850	\$30,100
Maximum Monthly Housing Cost ¹	\$488	\$558	\$628	\$696	\$753
Utility Deduction ²	\$34	\$40	\$49	\$60	\$74
Maximum Available for Rent ³	\$454	\$518	\$579	\$636	\$679
Maximum Available for Rent (Unit Type)	\$454	\$518	\$579	\$636	\$679
Very Low Income (50% AMI)					
Maximum Household Income at 50% AMI	\$32,550	\$37,200	\$41,850	\$46,450	\$50,200
Maximum Monthly Housing Cost ¹	\$814	\$930	\$1,046	\$1,161	\$1,255
Utility Deduction ²	\$34	\$40	\$49	\$60	\$74
Maximum Available for Rent ³	\$780	\$890	\$997	\$1,101	\$1,181
Maximum Available for Rent (Unit Type)	\$780	\$890	\$997	\$1,101	\$1,181
Low Income (60% AMI)					
Maximum Household Income at 60% AMI	\$39,060	\$44,640	\$50,220	\$55,740	\$60,240
Maximum Monthly Housing Cost ¹	\$977	\$1,116	\$1,256	\$1,394	\$1,506
Utility Deduction ²	\$34	\$40	\$49	\$60	\$74
Maximum Available for Rent ³	\$943	\$1,076	\$1,207	\$1,334	\$1,432
Maximum Available for Rent (Unit Type)	\$943	\$1,076	\$1,207	\$1,334	\$1,432
Moderate Income (110% AMI)					
Maximum Household Income at 110% AMI	\$71,995	\$82,280	\$92,565	\$102,850	\$111,100
Maximum Monthly Housing Cost ¹	\$1,800	\$2,057	\$2,314	\$2,571	\$2,778
Utility Deduction ²	\$34	\$40	\$49	\$60	\$74
Maximum Available for Rent ³	\$1,766	\$2,017	\$2,265	\$2,511	\$2,704
Maximum Available for Rent (Unit Type)	\$1,766	\$2,017	\$2,265	\$2,511	\$2,704

1. 30 percent of maximum monthly household income.

2. Assumptions used in the calculation of utility costs are based on schedules by unit size provided by the Oakland Housing Authority and information from the US Census on utilities commonly used in rental and ownership housing units.

3. Maximum monthly housing cost minus utility deduction.

Sources: City of Oakland, 2015; Oakland Housing Authority, 2014; Vernazza Wolfe Associates, Inc. 2015

**Table A-5
Affordable Sales Prices by Income Level and Unit Type**

Income Level and Unit Type ¹	Affordable Sales Price ²
Very Low-Income Households (50% AMI)	
1 Bedroom	\$61,657
2 Bedroom	\$87,572
3 Bedroom	\$104,663
4 Bedroom	\$118,596
Low-Income Households (70% AMI)	
1 Bedroom	\$109,641
2 Bedroom	\$145,124
3 Bedroom	\$168,642
4 Bedroom	\$187,702
Moderate-Income Households (110% AMI)	
1 Bedroom	\$266,445
2 Bedroom	\$333,318
3 Bedroom	\$377,900
4 Bedroom	\$413,660

1. The sales price table differs from the rental table in that a studio unit is not included for the sales calculations. This reflects the fact that there are no studio units developed for sale in single family detached or townhouse development in the Oakland housing market.

2. Assumes 30% of gross annual household income allocated to housing costs. Affordable sales prices are based on a number of assumptions, including standard loan terms for first-time home-buyers used by CalHFA programs and many private lenders:

- Downpayment: 5%
- Mortgage term: 30-year fixed rate
- Interest rate: 4.125%
- Property mortgage insurance: 0.89% of sales price
- Property insurance: 0.35% of sales price
- Property maintenance reserve: \$300 per month

Source: Vernazza Wolfe Associates Inc.

Table A-6

**Unit Types, Size, and Costs Used in Housing
Affordability Gap Analysis**

Rental Housing Cost @ \$515 per Net SF		
Unit Type by Number of Bedrooms	Unit Size (net SF)	Development Costs
Studio	500	\$257,500
1	600	\$309,000
2	850	\$437,750
3	1,200	\$618,000
4	1,500	\$772,500
For Sale Cost @ \$400 per Net SF		
Unit Type by Number of Bedrooms	Unit Size (net SF)	Development Costs
1	900	\$360,000
2	1,150	\$460,000
3	1,450	\$580,000
4	1,500	\$600,000

Sources: Vernazza Wolfe Associates, Inc., City of Oakland Housing Pro
Formas, and DataQuick Sales Data.

**Table A-7
Rental Housing Affordability Gap Calculation**

Income Level and Unit Type	Unit Size (SF)	Maximum Monthly Rent ¹	Annual Income	Net Operating Income ²	Available for Debt Service ³	Supportable Debt ⁴	Development Costs ⁵	Affordability Gap
Extremely Low-Income (30% AMI)								
Studio	500	\$454	\$5,442	(\$2,330)	\$0	\$0	\$257,500	\$257,500
1 Bedroom	600	\$518	\$6,210	(\$1,601)	\$0	\$0	\$309,000	\$309,000
2 Bedroom	850	\$579	\$6,942	(\$905)	\$0	\$0	\$437,750	\$437,750
3 Bedroom	1,200	\$636	\$7,635	(\$247)	\$0	\$0	\$618,000	\$618,000
4 Bedroom	1,500	\$679	\$8,142	\$235	\$235	\$3,106	\$772,500	\$769,394
Average Affordability Gap⁶								\$478,329
Very Low-Income (50% AMI)								
Studio	500	\$780	\$9,357	\$1,389	\$1,111	\$14,695	\$257,500	\$242,805
1 Bedroom	600	\$890	\$10,680	\$2,646	\$2,117	\$27,990	\$309,000	\$281,010
2 Bedroom	850	\$997	\$11,967	\$3,869	\$3,095	\$40,923	\$437,750	\$396,827
3 Bedroom	1,200	\$1,101	\$13,215	\$5,054	\$4,043	\$53,465	\$618,000	\$564,535
4 Bedroom	1,500	\$1,181	\$14,172	\$5,963	\$4,771	\$63,082	\$772,500	\$709,418
Average Affordability Gap⁶								\$438,919
Low-Income (60% AMI)								
Studio	500	\$943	\$11,310	\$3,245	\$2,596	\$34,321	\$257,500	\$223,179
1 Bedroom	600	\$1,076	\$12,912	\$4,766	\$3,813	\$50,420	\$309,000	\$258,580
2 Bedroom	850	\$1,207	\$14,478	\$6,254	\$5,003	\$66,157	\$437,750	\$371,593
3 Bedroom	1,200	\$1,334	\$16,002	\$7,702	\$6,162	\$81,472	\$618,000	\$536,528
4 Bedroom	1,500	\$1,432	\$17,184	\$8,825	\$7,060	\$93,351	\$772,500	\$679,149
Average Affordability Gap⁶								\$413,806
Moderate-Income (110% AMI)								
Studio	500	\$1,766	\$21,191	\$12,631	\$10,105	\$133,613	\$257,500	\$123,887
1 Bedroom	600	\$2,017	\$24,204	\$15,494	\$12,395	\$163,897	\$309,000	\$145,103
2 Bedroom	850	\$2,265	\$27,182	\$18,322	\$14,658	\$193,819	\$437,750	\$243,931
3 Bedroom	1,200	\$2,511	\$30,135	\$21,128	\$16,903	\$223,499	\$618,000	\$394,501
4 Bedroom	1,500	\$2,704	\$32,442	\$23,320	\$18,656	\$246,683	\$772,500	\$525,817
Average Affordability Gap⁶								\$286,648

Note: The calculation does not assume the availability of any other source of housing subsidy because not all "modest" housing is built with public subsidies, and tax credits and tax-exempt bond financing are highly competitive programs that will not always be available to developers of modest housing units.

- Affordable rents are based on City of Oakland's 2015 Income Limits. These are net rents, since utility costs have been deducted.
- Amount available for debt. Assumes 5% vacancy and collection loss and \$7,500 per unit for operating expenses and reserves.
- Assumes 1.25 Debt Coverage Ratio.
- Assumes 5.38%, 30 year loan. Calculations based on annual payments.
- Assumes development cost of \$515 per net square foot on rental units.
- Calculated as the simple average across all unit sizes because of variability in the relationship between household size and the type of unit occupied.

Sources: Vernazza Wolfe Associates, Inc., and selected Oakland Rental Housing Pro Forms.

**Table A-8
For-Sale Housing Affordability Gap Calculation**

Income Level and Unit Type	Unit Size (SF)	Affordable Sales Price ¹	Development Costs ²	Affordability Gap ³
Very Low-Income (50% AMI)				
1 Bedroom	900	\$61,657	\$360,000	\$298,343
2 Bedroom	1,150	\$87,572	\$460,000	\$372,428
3 Bedroom	1,450	\$104,663	\$580,000	\$475,337
4 Bedroom	1,500	\$118,596	\$600,000	\$481,404
Average Affordability Gap⁴				\$406,878
Low Income (70% of AMI)				
1 Bedroom	900	\$109,641	\$360,000	\$250,359
2 Bedroom	1,150	\$145,124	\$460,000	\$314,876
3 Bedroom	1,450	\$168,642	\$580,000	\$411,358
4 Bedroom	1,500	\$187,702	\$600,000	\$412,298
Average Affordability Gap⁴				\$347,223
Moderate Income (110% of AMI)				
1 Bedroom	900	\$266,445	\$360,000	\$93,555
2 Bedroom	1,150	\$333,318	\$460,000	\$126,682
3 Bedroom	1,450	\$377,900	\$580,000	\$202,100
4 Bedroom	1,500	\$413,660	\$600,000	\$186,340
Average Affordability Gap⁴				\$152,169

Note: The calculation does not assume the availability of any other source of housing subsidy because not all "modest" housing is built with public subsidies, and tax credits and tax-exempt bond financing are highly competitive programs that will not always be available to developers of modest housing units.

1. See Table A-5.
2. Assumes \$400/SF for development costs.
3. Calculated as the difference between affordable sales price and development cost.
4. Calculated as the simple average across all unit sizes because of variability in the relationship between household size and the type of unit occupied.

Sources: Vernazza Wolfe Associates, Inc., Habitat for Humanity pro forma, and DataQuick Sales Data.

Table A-9

Average Rental and For-Sale Housing Affordability Gap by Income Group

Income Level	Rental Gap	Ownership Gap	Combined Average Affordability Gap
Extremely Low-Income (30% AMI)	\$478,329	NA	\$478,329
Very Low-Income (50% AMI)	\$438,919	\$406,878	\$422,898
Low-Income (60% - 70% AMI)	\$413,806	\$347,223	\$380,514
Moderate-Income (110% AMI)	\$286,648	\$152,169	\$219,409

Source: Vernazza Wolfe Associates, Inc. 2015.