ATTACHMENT VI

KEYSER MARSTON ASSOCIATES

SUMMARY, CONTEXT MATERIALS AND RECOMMENDATIONS AFFORDABLE HOUSING ORDINANCE UPDATE

Prepared for:
City of Hayward

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ATTACHMENT A – RESIDENTIAL NEXUS ANALYSIS REPORT

I. INTRODUCTION

This Summary, Context Materials, and Recommendations report ("Summary Report") has been prepared by Keyser Marston Associates, Inc. (KMA) to support consideration of updated affordable housing requirements applicable to residential development in the City of Hayward ("City"). This Summary Report provides a concise version of the affordable housing nexus, financial feasibility and other analyses prepared by KMA and provides recommendations for updates to the City's affordable housing policies.

The Residential Nexus report is included as Attachment A to this Summary Report and provides the technical analyses and documentation to support Hayward's affordable housing impact fees applicable to residential development.

A. Hayward's Existing Affordable Housing Ordinance Requirements

The City of Hayward established its inclusionary program with adoption of an Inclusionary Housing Ordinance in 2003. The City's program has been amended twice since it was initially adopted, most recently in 2015 when the Affordable Housing Ordinance (AHO) currently in effect was enacted. Following is a description of Hayward's existing AHO requirements:

Ownership Housing Requirements

The AHO requires residential for-sale (or ownership) projects of twenty or more units to provide affordable units on-site or pay an in-lieu fee instead. Attached for-sale projects must provide 7.5% of units as affordable and detached projects must provide 10% of units as affordable to households at Moderate Income (up to 120% of Area Median Income).

The program has an in-lieu fee option which, following the 2015 update, is permitted by right. In-lieu fees are set well below the cost of providing units on-site. As a result, most projects comply through payment of fees rather than provide affordable units onsite. The current in-lieu fees are:

- Attached For-Sale Units: $3.87 per square foot if paid at building permit or $4.28 per square foot if paid at certificate of occupancy; and
- Detached For-Sale Units: $4.61 per square foot if paid at building permit or $5.06 per square foot if paid at certificate of occupancy.

Rental Housing Requirements

The AHO requires rental projects of twenty or more units to pay an impact fee of $3.63 per square foot (or $3.99 per square foot if paid at certificate of occupancy). Rental projects have the option to provide affordable units on-site as an alternative to payment of the impact fee. The on-site alternative is to provide 7.5% of units as affordable or 10% for detached rental projects. On-site affordable units must be split between Low and Very Low units.

B. Context for Update to Hayward's Program

Rising home prices and rents over the last several years have helped strengthen the housing market in Hayward to the point where the City is now experiencing development activity across a range of residential housing types including new single-family, townhomes, apartments and condominium units. At the same time, the escalation in prices and rents has exacerbated housing affordability challenges. Since Hayward last amended its requirements in early 2015, several other communities in the East Bay have adopted new or updated affordable housing requirements or have begun the process of considering them. These include Fremont, Union City, Oakland and Berkeley. With these recent trends as context and Hayward's requirements now at the low end of the range for cities in the inner East Bay, we understand the City wishes to consider strengthening the requirements of the AHO. The analysis and recommendations summarized in this report have been prepared to support consideration of updated affordable housing requirements applicable to residential development in Hayward.

New Legislation (AB 1505) – California communities have not had the ability to apply inclusionary requirements to rental projects since the 2009 *Palmer* case (Palmer/Sixth Street Properties L.P. v. City of Los Angeles [2009] 175 Cal. App. 4th 1396), described further in Attachment A. On September 29th the Governor signed AB 1505, restoring the ability to require on-site affordable units within rental projects.

C. Organization of this Report

This report is organized into the following sections:

- Section I provides an introduction;
- Section II presents a summary of KMA's findings and recommendations;
- Section III summarizes the nexus analysis;
- Section IV presents analyses and materials prepared to provide context for policy decisions, including:
    a. Financial Feasibility Analysis – presents the analysis and findings of the real estate financial feasibility analysis covering four types of residential development in Hayward;
    b. On-site compliance cost analysis – analysis of the forgone revenue experienced by market rate residential projects in complying with the City's inclusionary policy;
    c. Residential affordable housing requirements in other jurisdictions – provides a summary of existing inclusionary and impact fee requirements for 18 jurisdictions in Alameda and Santa Clara counties;
- Attachment A is the full Residential Nexus Analysis report.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

In this section, KMA provides a summary of the analysis findings and recommendations for updates to the City's Affordable Housing Ordinance. Recommendations reflect consideration of the following factors:

1. The findings of the nexus analysis. The nexus study establishes the maximum fee that may be charged to mitigate the impacts of new development on the need for affordable housing. Inclusionary requirements are generally not bound by nexus findings, but cannot be so high as to be confiscatory or to constitute a taking.
2. The City's policy objectives specified in the Housing Element.
3. The current requirements in neighboring jurisdictions.
4. Setting requirements high enough to support a meaningful contribution to affordable housing in Hayward.
5. Setting requirements low enough to not discourage development.

A. Summary of Findings

The following section provides an overview of KMA's analysis and factors that were considered in developing recommendations for updates to the City's Affordable Housing Ordinance.

1. Nexus Analysis Findings

The findings of the residential nexus analysis are summarized below. The findings per square foot refer to net residential area (exclusive of parking, corridors and other common areas).

Table 1 – Maximum Supported Residential Impact Fees, City of Hayward

	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Per Market Rate Unit	$72,200	$63,400	$44,900	$40,400
Per Square Foot	$28.90	$31.80	$44.90	$44.90

Source: Keyser Marston Associates, Attachment A Residential Nexus Analysis.

For small projects where fees may be the primary compliance option available because a whole affordable unit would not be owed under the on-site requirements of the AHO, it is advisable to maintain fees within the maximums supported by the nexus. In addition, for financial feasibility reasons, recommended fees for all project types are less than the maximums supported by the nexus, as described below.

2. Affordable Housing Requirements in Other Jurisdictions

KMA has assembled and summarized affordable housing requirements for 18 jurisdictions in Alameda and Santa Clara counties. These materials were assembled in 2016 for purposes of a multi-jurisdiction nexus study in which Hayward participated for purposes of the non-residential scope of services only and have been partially updated. Following is a condensed version focusing on selected comparisons. A complete summary is provided in Section IV at the end of this report.

Rentals: Overview of Adopted Rental Housing Impact Fees in Alameda County

The chart below shows selected examples of cities in Alameda County that have adopted impact fees for rental development following the 2009 Palmer decision (which eliminated the ability to apply inclusionary requirements to rental projects). There is a wide range in fee levels for rental projects and fees are expressed differently by jurisdiction, with some fees levied on a per market rate unit basis and others on a per square foot basis. Hayward's fees are well below levels in the other cities.

In Hayward, the minimum size project subject to the fee is 20 units while Oakland's and Union City's pending requirements will apply to projects of all sizes. Fremont's fees apply to projects with two or more units and Berkeley's to projects with five or more units.

Table 2 – Impact Fees in Other Jurisdictions – Rental Units

City	*Impact Fee*	*Min. Project Size Subject to Fee*
Hayward	$3.63/sq. ft.*	20 units
Fremont	$17.50/sq.ft.	2 units
Union City	$14 / Square Foot (Year 3 full phase-in level)**	1 unit
Berkeley	$34,000 per unit if paid at building permit or $37,000 per unit if paid at certificate of occupancy.	5 units
Oakland	$12,000 to $22,000 per unit (varies by zone)	1 unit

See Table 17 for more detail. Data is current as of the time of the survey in 2016 with partial updating in 2017.
* If paid at building permit. An additional 10% is added if the developer elects to pay at certificate of occupancy.
**Council directed staff to prepare an ordinance consistent with the requirements outlined above; however, the changes to the program reflected in this summary are not yet adopted.

Ownership Affordable Housing Requirements

For ownership projects, the most common onsite requirement is 15% with Alameda, Albany, San Leandro, and Union City all at this level. Berkeley is higher at 20%; Oakland has two options: 5% at Very Low or 10% at Low to Moderate. Fremont uses an approach that combines both an on-site requirement and an impact fee. The majority of programs allow in-lieu fee payment as an

alternative to providing units on-site, Hayward included. Hayward's current in-lieu fees are at the low end of the range of the surveyed programs. San Leandro, Albany and Alameda allow in-lieu fee payment for small projects only.

Table 3 – Ownership Unit Affordable Housing Requirements in Other Jurisdictions

City	*Affordable Units Required (Percent)*	*Affordability Level*	*Fee In-Lieu of Providing Units*	*Fee by Right?*
Hayward	7.5% (attached) 10% (detached)	Moderate	$3.87* psf (attached) $4.61* psf (detached)	Yes
Albany	15%	½ Low and ½ Very Low	(Market Value – Affordable Price) * Units Owed	5 & 6 unit projects only
San Leandro	15%	60% Moderate, 40% Low	(Median Sale Price – Affordable Price) * Units Owed	Projects of 2 to 6 units only
Union City	15%	60% Moderate, 30% Median, 10% Low	City Council direction**: $22 psf (Year 2 full phase-in level)	Yes**
Alameda	15%	47% Moderate, 27% Low, 27% Very Low	$19,076 per residential unit	Projects under 10 units only
Oakland	Option A: 5% Option B: 10%	Option A: Very Low Option B: Low – Moderate	MF: $12-$22,000 / unit SF: $8-$23,000 / unit	Yes
Berkeley	20%	Low	62.5% * (Sale Price – Aff. Price) * units owed	Yes
Dublin	7.5% plus fee 12.5% w/o fee	60% Moderate, 40% Low	$127,061 / affordable unit owed	Yes (partial)
Fremont	Attached 3.5% + fee Detached: 4.5% + fee	Moderate	With on-site units: Attached: $18.50 psf Detached: $17.50 psf If no on-site units: Attached: $27 psf Detached: $26 psf	Yes
Pleasanton	MF: 15% SF: 20%	MF: Low SF: Moderate	MF: $2,783 /unit SF <1,500 sf: $2,783/unit SF>1,500 sf: $11,228/unit	Yes

MF: Multi-family; SF: Single family

See Table 17 for more detail. Data is current as of the time of the survey in 2016 with partial updating in 2017.

* If paid at building permit. An additional 10% is added if the developer elects to pay at certificate of occupancy.

**Council directed staff to prepare an ordinance consistent with the requirements identified above; however, changes to the program are not yet adopted.

3. Market Context

Hayward has a range of residential product types in the development pipeline and currently marketing including single family, townhomes, apartments and stacked condominiums. New residential development is occurring along the Mission Boulevard corridor, on opportunity sites in the Downtown and in other locations throughout the City where developers have been able to assemble sites.

Pricing has risen significantly over the past several years on the strength of the regional economy, low mortgage rates, and limited housing supply. A new prototypical single family detached home 2,500 square feet in size can now be expected to sell for $950,000 or $380 per square foot. Prototypical attached townhome units are smaller but sell for more on a per square foot measure estimated at $400 per square foot. Higher density stacked condominiums are still an emergent project type although there are now two such projects under development review (Matyas Village and Mission Seniors), one of which is a senior project.

The rental market in Hayward is showing signs of strength. There is one recently built rental project near the South Hayward BART station and four more rental projects in the development pipeline (Maple and Main, Lincoln Landing, Campways and Haymont Village). A prototypical 900-square foot apartment in a newly developed rental project is now estimated to rent for $2,800 per month.

See Appendix A to the Residential Nexus Analysis for more detail and supporting data.

4. Financial Feasibility

KMA tested the financial feasibility of four types of residential development projects in Hayward including single family detached, townhome/attached, apartments and stacked flat condominiums. The analysis indicates that single family, townhomes and apartments are all currently feasible. The significant number of residential projects in the City's new development pipeline is also an indication of financial feasibility. The stacked flat condominium prototype is the only prototype where feasibility was found to be somewhat marginal at this time.

Even in a strong market, rising land costs tend to absorb any "surplus" projects may have in their pro formas; however, the market is able to adjust to new costs such as increased affordable housing requirements in a variety of ways. One way that markets can adjust is through downward pressure on land prices created when developers price new requirements into the economics of their projects and adjust what they can afford to pay for land. When market prices and rents are rising, this condition also helps projects absorb the cost associated with new or increased requirements.

KMA used the pro forma analysis to test three scenarios with increased affordable housing requirements representing a cost of $10/square foot, $15/square foot and $20/square foot. As one example, a $15/square foot requirement could be absorbed by increases in sale prices and rents in the range of 1.6% for the apartment prototype and 2.8% for the townhome prototype.

Table 4 – Overview of Financial Feasibility Analysis Findings				
Prototype	*Single Family Detached*	*Townhome/ Attached*	*Condominiums*	*Apartments*
Feasibility Conclusion with existing requirements	Feasible	Feasible	Marginally Feasible	Feasible
Supported Land Value ($/acre)	$1,457,000	$1,556,000	$1,322,500	$2,174,000
Market Rent / Sales Price Increase Sufficient to Absorb Updated Requirements				
Representing Cost of $10/SF	1.4%	1.5%	1.0%	0.9%
Representing Cost of $15/SF	2.7%	2.8%	1.9%	1.6%
Representing Cost of $20/SF	4.1%	4.0%	2.7%	2.3%
Land Value Decrease to Absorb Updated Requirements				
Representing Cost of $10/SF	9%	16%	14%	16%
Representing Cost of $15/SF	18%	29%	26%	28%
Representing Cost of $20/SF	26%	41%	37%	41%

Note: adjustments would each be independently sufficient to absorb increased requirements.

See Section IV. A. for the full range of scenarios that were tested.

B. Program Recommendations

The City has had an inclusionary housing program in place since 2003 and has updated its requirements on two prior occasions. The analyses and information generated in this work program will be helpful to the City in updating the program to respond to the current strong conditions in the local housing development market coupled with deepening affordability challenges. Following are KMA recommendations, based on consideration of local market conditions, the real estate financial feasibility analysis, nexus analysis results, requirements in neighboring cities, our understanding of the City's policy objectives, and other factors.

Ownership Program Recommendations:

a. *Requiring or Encouraging On-site Affordable Units* – We understand the City would like to encourage more projects to provide affordable units on-site rather than receive in-lieu fees. Two primary approaches for accomplishing this in for-sale projects are to:

   - Require on-site units and remove the option of paying an in-lieu fee, or
   - Increase fees to the point where the decision to provide affordable units on-site becomes financially advantageous for the developer relative to fee payment.

   KMA recommends requiring affordable units be provided on-site within for-sale projects of 10 units or more and removing the option to pay an in-lieu fee except for specific project types as described in c. below. We understand inclusion of units onsite within new development projects to be a core City objective of the AHO update and eliminating the in-lieu fee option would be the surest way to achieve this outcome.

b. *Affordable Unit Percentage* – KMA recommends making on-site affordable unit percentage requirements consistent for attached and detached units and setting the requirement at no more than 10%. The cost associated with providing onsite affordable units is similar for single family detached and attached townhomes on a per square foot basis. This 10% recommendation is estimated to equate to a developer cost in the range of $20 to $21 per square foot for prototypical single family and townhome units. Based on the findings of the feasibility analysis, these increased requirements could be absorbed with a relatively modest 4% further improvement in the for-sale market in Hayward. Section IV B. provides additional information if the City would like to consider adjustments to affordable unit pricing from the current 110% of AMI requirement.

   While we recognize some neighboring jurisdictions have higher percentage requirements than recommended for Hayward, including several at 15%, it is useful to keep in mind the following additional background in drawing comparisons: a) Union City's 15% requirement has a fee option that costs less than providing the units onsite

and b) in San Leandro our general understanding is that there has been limited development activity to evidence feasibility of the City's mandatory 15% onsite requirement.

c. *Adjustments to Requirements for Specific Project Types* – the following describes recommendations for application of modified requirements to several specific project types:

   - *Larger Lot Single Family* - The City may wish to consider allowing fee payment for certain single family projects, such as those above a lot size threshold. Providing affordable units onsite within single family projects is often costlier on a per affordable unit basis, especially those with larger lots and higher priced units. Larger lot single family units are also more likely to be built in areas less accessible to transportation, services and amenities; therefore, these projects may be less desirable locations for affordable units to be provided onsite. Allowing fee payment for larger lot single family projects would allow the City to maintain a source of local funding that may be leveraged with outside funding sources to produce a greater number of affordable units than could be provided onsite within larger lot single family home developments. While selection of a threshold is a matter of policy preference; we suggest consideration of a lot size of +/- 4,000 square feet and higher for allowing fee payment.

   - *Higher Density Condos* – Condominiums at higher densities, such as over 35 units per acre, currently face feasibility challenges relative to other for-sale development types and the market for these projects in Hayward remains unproven. The cost to provide affordable units onsite in a higher density condo project is also estimated to be 20% higher on a per square foot basis than for townhomes. If the City would like to encourage this development type, we recommend lower percentage requirements of up to 7.5% consistent with KMA's recommendations for rental projects and / or allowing fee payment for these projects.

d. *In-lieu Fee Level* – Where permitted, KMA recommends consideration of an increased in-lieu fee in the range of $15 to $20 per square foot. A requirement at this level would bring Hayward nearer to, but still below, what other jurisdictions in the East Bay such as Union City and Fremont require. Selection of a fee at the upper end of this range would represent an equivalent cost to the maximum on-site requirements recommended above. While there are other viable alternatives for structuring fees, our suggestion is to continue the existing approach of charging fees on a per square foot basis. This is a common approach, is simple to administer, and ensures fees are kept proportionate to unit size, with small units paying less and large units paying more.

e. *Project Size Thresholds* – The 20-unit minimum project size subject to the City's AHO is among the highest thresholds in the East Bay. The nexus analysis allows the City to consider fees that apply to small projects and even single units. KMA recommends consideration of a threshold of 2 units for projects to become subject to fees and a threshold of 10 units for applicability of the on-site build requirement, which is the minimum project size for which a whole affordable unit would be owed with a 10% affordability requirement (this 10-unit threshold should be adjusted if a different onsite percentage is selected). Allowing in-lieu fee payment for small projects with 9 or fewer units avoids placing a disproportionate burden on small projects for which percentage requirements would result in less than a full affordable unit being owed.

   A step up of fees for projects with 2 to 9 units is recommended to avoid creating a disincentive for small multi-unit projects. One potential formula-based approach to a step up is identified below. The formula is equivalent to exempting the first unit in the project based on the average-sized unit.

Applicable PSF fee = Full PSF Fee X (No. Units - 1) / (No. of units).

   Alternatively, the formula can be converted to a set of percentages than can be used to adjust the per square foot fee applicable to small projects:

Number of Units in Project	Percentage Factor to Reduce Per Square Foot Fee for two to nine-unit projects
2	50%
3	67%
4	75%
5	80%
6	83%
7	86%
8	88%
9	89%

Rental Program Recommendations:

Under the existing AHO, rental projects must pay an impact fee or may elect to voluntarily provide 7.5% affordable units to mitigate their impact, rather than pay the impact fee. AB 1505, which was signed by the Governor on September 29th, restored the ability to implement inclusionary requirements for rental projects. Following are recommendations for updates to the AHO following enactment of AB 1505 as well as under the law as it existed prior to AB 1505.

a. *Rental Recommendations with Enactment of AB 1505* – With enactment of AB 1505, the City has the ability to make onsite affordable units mandatory in rental projects[1]. This is recommended if the City has a very strong preference for units to be provided onsite over fees which could be combined with tax credits and other sources to assist all affordable projects. If the onsite requirement becomes mandatory, based on the feasibility analysis, KMA recommends considering modifications to bring the cost of complying with requirements to no more than approximately $20 per square foot. The current 7.5% onsite option at Low and Very Low-Income is estimated to cost projects approximately $27 per square foot to provide. Two possible options for reducing compliance costs to within the $20 per square foot range are to a) allow rents to be set at up to 80% of AMI, a level few affordable rentals serve because it is above the rent level allowed for projects with tax credit financing, or b) reduce the percentage requirement to between 5% and 6% while maintaining the existing income level. We recommend continuing to allow fee payment in rental projects below a threshold size in the range of, say, +/- 100 units to avoid getting small numbers of affordable rental units in scattered locations that could increase the administrative burden of enforcing affordability covenants. Administrative burden associated with scattered units is more of an issue with rental than for-sale because compliance monitoring occurs regularly, not just upon resale as with ownership units. For projects below this threshold, KMA recommends fees be set in the $15 to $20 per square foot range, consistent with ownership units.

b. *Rental Recommendations Under Prior Law* – Prior to AB 1505, the City could seek to encourage voluntary provision of onsite units by implementing one of the two options for reducing the cost of compliance described above in combination with an increase to the impact fee level. Depending on how strong of an incentive for onsite units the City wishes to create, impact fees could be set from $20 per square foot anywhere up to the maximum supported by the nexus study. For projects under a threshold size of, say, +/- 100 units, we recommend fees be limited to $15 to $20 per square foot to avoid incentivizing provision of small numbers of onsite affordable rental units in scattered locations which could increase the administrative burden of enforcing affordability covenants.

   If the City prefers to keep fees in line with other jurisdictions and does not see on-site units as a priority in rental projects, then a lower fee in the $10 to $15 psf range could be a better fit. A fee in the $10 to $15 psf range would place Hayward's requirements in the same range as Union City's at $14 per square foot and comparable to levels adopted by Oakland of $12,000 per unit at full phase applicable to the southern portion of the City which is equivalent to $13 per square foot for a 900 SF apartment.

[1] However, at least one alternative must be provided, for example, off-site construction of affordable units.

c. *Project Size Threshold* – Move to a lower threshold for application of requirements, such as two units, consistent with KMA recommendations for the ownership program.

Since the above recommendations represent a significant increase in the affordability obligations of new residential projects, KMA recommends a provision to avoid negatively impacting projects currently in the pipeline. Two potential approaches are a phase-in and grandfathering. With a phase in approach, requirements could be phased in incrementally. With grandfathering, the City could elect to apply requirements in place as of the time projects reach a certain stage in the process, such when an application is deemed complete. City staff have indicated the grandfathering method offers the best continuity with past City practices.

III. SUMMARY OF NEXUS ANALYSIS

This section provides a concise summary of the residential nexus analysis prepared for the City of Hayward. The analysis provides documentation necessary for adoption of updated affordable housing impact fees applicable to residential development. The analysis establishes maximum supportable impact fee levels based on the impact new residential development has on the need for affordable housing. Findings represent the results of an impact analysis only and are not recommended fee levels.

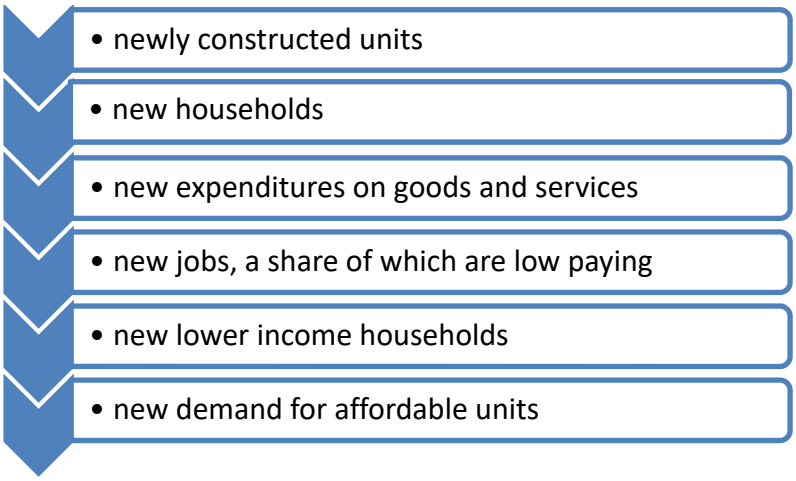
Nexus findings represent upper limits for impact fees. However, inclusionary housing requirements, including those that give the developer the option of paying an in-lieu fee, are not required to be justified by nexus studies, although they cannot be 'confiscatory,' based on the 2016 ruling by the California Supreme Court in the San Jose inclusionary zoning case.

Full documentation of the analyses can be found in the report titled Residential Nexus Analysis included as Attachment A.

A. Residential Nexus Analysis Summary

The residential nexus analysis establishes maximum supportable impact fee levels applicable to residential development. The underlying concept of the residential nexus analysis is that the newly constructed units represent net new households in Hayward. These households represent new income in the City that will consume goods and services, either through purchases of goods and services or "consumption" of governmental services. New consumption generates new local jobs; a portion of the new jobs are at lower compensation levels; low compensation jobs relate to lower income households that cannot afford market rate units in Hayward and therefore need affordable housing.

Nexus Analysis Concept



1. Market Rate Residential Prototypes

In collaboration with City staff, a total of four market rate residential prototypes were selected: three ownership prototypes and one rental prototype. The intent of the selected prototypes is to identify representative development prototypes likely to be developed in Hayward in the immediate to mid-term future.

A summary of the four residential prototypes is presented below. Market survey data, City planning documents and other sources were used to develop the information. Market sales prices and rent levels were estimated based on KMA's market research.

Table 5 – Prototypical Units for City of Hayward

	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Avg. Unit Size	2,500 SF	2,000 SF	1,000 SF	900 SF
Avg. No. of Bedrooms	4.00	3.50	2.00	1.50
Avg. Sales Price / Rent	$950,000	$800,000	$590,000	$2,800 /mo.
Per Square Foot	$380 /SF	$400 /SF	$590 /SF	$3.11 /SF

B. Household Expenditures and Job Generation

Using the sales price or rent levels applicable to each of the four market rate residential prototypes, KMA estimates the household income of the purchasing/renting household. Household income is then translated to income available for expenditures after deducting taxes, savings and household debt, which becomes the input to the IMPLAN model. The IMPLAN model is used to estimate the employment generated by the new household spending. The IMPLAN model is an economic model widely used for the past 35 years to quantify the impacts of changes in a local economy. For ease of presentation the analysis is conducted based on an assumed project size of 100 market rate units.

A 20% downward adjustment is made to the IMPLAN employment estimates based on the expectation that a portion of jobs may be filled by existing workers who already have housing locally. The 20% adjustment is based upon job losses in declining sectors of the local economy over a historic period. "Downsized" workers from declining sectors are assumed to fill a portion of the new jobs in sectors that serve residents.

The translation from market rate sales prices and rent levels for the prototypical units to the estimated number of jobs in sectors such as retail, restaurants, health care and others providing goods and services to new residents is summarized in the table below.

Table 6 – Household Income, Expenditures, Job Generation, and Net New Worker Households				
	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Avg. Sales Price / Rent	$950,000	$800,000	$590,000	$2,800
Gross Household Income	$187,000	$162,000	$121,000	$117,000
Net Annual Income available	$125,300	$110,200	$82,300	$74,000
Total Jobs Generated [from IMPLAN] (100 Units)	93.0	81.8	58.2	52.3
Net New Jobs after 20% reduction for declining industries (100 units)	74.4	65.4	46.5	41.9

See Attachment A Residential Nexus Analysis for full documentation.

C. Compensation Levels of Jobs and Household Income

The output of the IMPLAN model – the numbers of jobs by industry – is then entered into the Keyser Marston Associates jobs housing nexus analysis model to quantify the compensation levels of new jobs and the income of the new worker households. The KMA model sorts the jobs by industry into jobs by occupation, based on national data, and then attaches local wage distribution data to the occupations, using recent Alameda County data from the California Employment Development Department (EDD). The KMA model also converts the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced. For purposes of the adjustment from jobs to housing units, the average of 1.62 workers per working household in Alameda County is used.

Table 7 – Adjustment from No. of Workers to No. of Households				
	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Net New Jobs (100 Units)	74.4	65.4	46.5	41.9
Divide by No. of Workers per Worker Household	1.62	1.62	1.62	1.62
Net new worker households (100 Units)	45.9	40.3	28.7	25.8

The output of the model is the number of new worker households by income level (expressed in relation to the Area Median Income, or AMI) attributable to the new residential units and new households in Hayward. Four categories are addressed: Extremely Low (under 30% of AMI), Very Low (30% to 50% of AMI), Low (50% to 80% of AMI) and Moderate (80% to 120% of AMI).

Following are the numbers of worker households by income level associated with the Hayward prototype units.

Table 8 – New Worker Households per 100 Market Rate Units

	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Extremely Low (0%-30% AMI)	5.1	4.5	3.2	2.9
Very Low (30%-50% AMI)	11.8	10.4	7.4	6.6
Low (50%-80% AMI)	12.2	10.8	7.6	6.8
Moderate (80%-120% AMI)	7.4	6.5	4.6	4.1
Total, Less than 120% AMI	**36.6**	**32.2**	**22.8**	**20.5**
Greater than 120% AMI	9.3	8.2	5.9	5.3
Total, New Households	**45.9**	**40.3**	**28.7**	**25.8**

See Attachment A Residential Nexus Analysis for full documentation.

Housing demand is distributed across the lower income tiers. The finding that the greatest number of households occurs in the Very Low and Low income tiers is driven by the fact that a large share of jobs most directly associated with consumer spending tend to be low-paying, such as food preparation, administrative, and retail sales occupations.

D. Nexus Supported Maximum Fee Levels

The next step in the nexus analysis takes the number of households in the lower income categories associated with the market rate units and identifies the total subsidy required to make housing affordable. This is done for each of the prototype units to establish the 'total nexus cost,' which is the Maximum Supported Impact Fee conclusion of the analysis. For the purposes of the analysis, KMA assumes that affordable housing fee revenues will be used to subsidize affordable rental units for households earning less than 80% of median income, and to subsidize affordable ownership units for households earning between 80% and 120% of median income. Affordability gaps are calculated for each of the income tiers; the nexus costs are calculated by multiplying the affordability gaps by the number of households in each income level.

The Maximum Supported Impact Fees are calculated at the per-unit level and the per-square-foot level and are shown in the table below.

Table 9 – Maximum Supported Residential Impact Fees, City of Hayward

	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Per Market Rate Unit	$72,200	$63,400	$44,900	$40,400
Per Square Foot*	$28.90	$31.80	$44.90	$44.90

* Applies to net rentable / sellable area exclusive of garage space, external corridors and other common areas.

These costs express the maximum supported impact fees for the four residential prototype developments in Hayward. These findings are **not** recommended fee levels.

IV. CONTEXT MATERIALS

The purpose of this section is to provide information that may be useful to policy makers in considering potential amendments to the City's affordable housing requirements for residential development and potential adoption of a new affordable housing impact fee applicable to non-residential development. The following analyses and summary materials are included:

- **Real Estate Financial Feasibility Analysis** – Section A. presents the analysis and findings regarding the financial feasibility of new market rate residential development;

- **Inclusionary Program Compliance Costs** – Section B. analyzes the cost to a market rate residential project of complying with the City's existing inclusionary policy;

- **Residential Affordable Housing Requirements in Other Jurisdictions** – Section C. provides a summary of inclusionary and impact fee requirements in other jurisdictions;

A. Real Estate Financial Feasibility Analysis

In adopting or amending affordable housing requirements, cities typically consider a variety of public policy goals including seeking a balance between producing a meaningful amount of new affordable units and establishing requirements at a level that can be sustained by new market rate projects. This section addresses the potential impacts that new affordable housing fees could have on the feasibility of new development projects.

Before describing the feasibility analysis, it is useful to put the feasibility analysis into perspective by summarizing how it can be used and where limitations exist in its ability to inform a longer-term policy direction:

- *Prototypical Nature of Analysis* – This financial feasibility analysis, by its nature, can only provide a general assessment of development economics because it is based on prototypical projects rather than specific projects. Every project has unique characteristics that will dictate sale prices and rents supported by the market as well as development costs and developer return requirements. This feasibility analysis is intended to reflect prototypical residential projects in Hayward but it is recognized that the economics of actual projects will differ to some degree from those of the prototypes analyzed.

- *Near Term Time Horizon* – This feasibility analysis is a snapshot of real estate market conditions as of mid-year 2017. The analysis is most informative regarding near term implications updated affordable housing requirements could have for projects that have already purchased sites and are currently in the pre-development stages. Real estate development economics are fluid and are impacted by constantly changing conditions

regarding sale price and rent potential, construction costs, land costs, and costs of financing. A year or two from now, conditions will undoubtedly be different to some degree.

- *Adjustments to Land Costs over Time* – Developers purchase development sites at values that will allow for financially feasible projects. If housing requirements are updated, developers will "price in" the updated requirement when evaluating a project's economics and negotiating the purchase price for development sites. Given that the requirements will apply to all or most projects, it is possible that downward pressure on land costs could result as developers adjust what they can afford to pay for land. This downward pressure on land prices can bring costs back into better balance with the overall economics supported by projects.

Market Context

Like most parts of the Bay Area, Hayward has experienced improving residential market conditions in recent years as exhibited by rapidly rising home prices and apartment rents and new development activity. The improvement in market conditions is attributable to robust regional job growth and the overall strength of the regional economy. It is also acknowledged that, while home prices and apartment rents have grown significantly, the strong real estate market has also had the offsetting effect of driving construction cost inflation.

Financial Feasibility Analysis

The financial feasibility analysis estimates the costs to develop new residential projects and the sale revenues or rental income that could be generated by the projects upon completion. If the revenues are sufficient to support the development costs and to generate a sufficient profit margin, the project is considered feasible. This approach to financial feasibility, known as a pro forma approach or income approach, is common practice in the real estate industry and is utilized in one form or another by all developers when analyzing new construction projects.

This analysis organizes the pro forma as a "land residual analysis", meaning the pro forma solves for what the project can afford to pay for a development site based on the revenue projections and the non-land acquisition costs of the project. It then compares the residual land values with land costs in the current market in order to test whether developers can afford to buy land and develop projects. The following describes the assumptions utilized in the analysis and the conclusions drawn therefrom.

- The direct construction costs of development include all contractor labor and material costs to construct the project including general requirements, contractor fees, and contingencies. As shown in Table 10 below, the direct construction costs are estimated to range from $296,300/unit for the apartment prototype to $462,500/unit for the single

family detached prototype. These estimates have been made based on third party construction data sources, such as RS Means, and by cost estimates for similar building types elsewhere in the market. Indirect costs of development include architecture and engineering (A&E) costs, municipal fees and permits costs, taxes, insurance, overhead, and financing costs. The fees and permits cost estimates include Hayward's current affordable housing fees of $4.61, $3.87, and $3.63/square foot for the single family detached prototype, attached for-sale prototypes (townhomes and condos) and rental apartment prototype respectively.

- Market rate sale prices have been estimated to range from $590,000/unit for the stacked flat condominium prototype to $950,000/unit for the single family detached prototype.

- Rental income for the apartment prototype has been estimated at $2,800/month, or $3.11/square foot/month. After a vacancy factor, operating expenses, and property taxes, the net operating income (NOI) has been estimated at $21,730/unit/year. Using this NOI and applying a 5.2% project return, the project value/supported investment is estimated at $418,000/unit.

- The residual land value is derived by subtracting the development costs before land acquisition from the project value/supported investment. As shown in Table 10, the residual land values range from $26,400/unit to $145,600/unit and from $1.32 million to $2.17 million/acre.

Once the residual land values have been estimated, the values can be compared to prevailing land values in the market to determine whether the prototypes are financially feasible. In other words, if the residual land values are equal to or higher than market land values, then projects are generally feasible. Conversely, if the residual land values are less than market land values, some improvement in market conditions (lower development costs or higher housing values) will likely be needed for feasibility.

Table 10 – Summary of Residual Land Value Analysis				
Prototype	*Single Family Detached*	*Townhome/ Attached*	*Condominiums*	*Apartments*
Acreage	2.0 acres	2.0 acres	2.0 acres	2.0 acres
Total Units	20 units	40 units	100 units	120 units
Density	10.0 du/acre	20.0 du/acre	50.0 du/acre	60.0 du/acre
Average Unit Size	2,500 sq.ft.	2,000 sq.ft.	1,000 sq.ft.	900 sq.ft.
Development Costs	$/Unit	$/Unit	$/Unit	$/Unit
Land Acquisition	$0	$0	$0	$0
Directs	$462,500	$400,000	$332,500	$296,300
Indirects				
A&E	$28,000	$20,000	$13,300	$11,800
Affordable Housing Fee	$11,600	$7,800	$3,900	$3,300
Other Fees & Permits	$52,500	$42,000	$35,000	$31,500
Taxes/Insurance/Legal	$37,500	$37,500	$15,000	$6,700
Sales & Marketing	$12,500	$10,000	$7,500	$5,000
Administrative/Other	$18,500	$16,000	$16,600	$14,800
Financing	$33,800	$26,400	$19,900	$12,400
Total Costs Excluding Land	$656,900	$559,700	$443,700	$381,800
Residual Land Value	$/Unit	$/Unit	$/Unit	$/Unit
Sale Price/Monthly Rent	$950,000	$800,000	$590,000	$2,800
$/Sq.Ft.	$380	$400	$590	$3.11
Net Supported Investment [1]	$802,500	$637,400	$470,100	$418,000
(Less) Costs Excluding Land	($656,900)	($559,700)	($443,700)	($381,800)
Residual Land Value/Unit	$145,600	$77,700	$26,400	$36,200
Land Value/Acre	$1,456,000	$1,554,000	$1,320,000	$2,172,000
Land Value/Land SF	$33	$36	$30	$50

[1] Net Supported Investment after sales commissions and profit margin with for-sale prototypes; after vacancy, operating expenses, and profit margin for apartment prototype. See Tables 13 and 14 for further detail.

Prevailing Land Values

In order to assess prevailing land values for residential development in Hayward, KMA reviewed relevant land sale comparables in Hayward (comps) from 2015 to 2017. The sale prices of these comps ranged from as low as $32,000/unit to as high as $120,000/unit. The wide range in per-unit values is largely attributable to the difference in unit sizes and densities among the projects. Based on the fact that some of the land sales reviewed for this analysis occurred in 2015 and 2016, the values for these comps would be expected to be somewhat higher today after accounting for land value appreciation.

Table 11 – Residential Land Sale Comparables (2015-2017), City of Hayward

	Address	Sale Date	Acres	Proposed Units	DU/Acre	Sale Price	$/Acre (rounded)	$/Unit (rounded)
Sorted by Density								
1	22471-22491 Maple Ct	Jul-16	0.60	44	73.1	$1,950,000	$3,239,000	$44,300
2	Mission Seniors	Mar-16	5.13	203	39.6	$6,500,000	$1,267,000	$32,000
3	27794 Mission Blvd	Jun-16	0.24	9	38.2	$400,000	$1,699,000	$44,400
4	21339 Oak St	Jul-16	1.66	58	35.0	$2,050,000	$1,238,000	$35,300
5	25501 Mission Blvd	Jun-17	7.64	237 *	31.0	$15,800,000	$2,068,000	$66,700
6	22836 Watkins St	Nov-15	0.27	6	22.5	$500,000	$1,878,000	$83,300
7	24755 O'Neil Ave	Nov-15	0.80	16	20.1	$735,000	$922,000	$45,900
8	396 Grove Way	Oct-15	0.44	5	11.4	$505,000	$1,148,000	$101,000
9	1332 E St	Jun-17	0.21	2	9.6	$240,000	$1,148,000	$120,000

Source: CoStar, RealQuest, Loopnet

*Includes 93 "guest" rooms.

Feasibility Conclusion

Based on the comparison of residual land values to recent land transactions in the market, this analysis concludes that the single family detached, townhome/attached, and apartment prototypes are generally feasible at this time, including payment of the City's current affordable housing fees. The significant number of residential projects in the City's new development pipeline is also an indication of market feasibility. The stacked flat condominium prototype is the only prototype that does not appear to support a land value in line with market transactions. However, a relatively minor adjustment to the estimated average sale price of these units (roughly 3%), would likely bring this prototype within the range of financial feasibility.

Potential Market Adjustments to Absorb Increased Requirements

To illustrate the impacts a potential increase in affordable housing requirements could have to financial feasibility, KMA used the pro forma analysis to test three alternative affordable housing requirements representing a cost of $10/square foot, $15/square foot, and $20/square foot. For purposes of this test it is assumed these fee levels would replace the current fee levels of $4.61, $3.87, and $3.63/square foot (i.e. they would not be additive). Note that while expressed in terms of dollars per square foot, these requirement levels can readily be converted to equivalent cost on-site inclusionary requirements using the information presented in the next section.

Since the feasibility analysis is a snapshot in time analysis based on current market conditions, in can be instructive to consider how relatively modest improvements in project economics (e.g. continued increases in sale prices and rents) can help to absorb increased fees. As one example, a $15/square foot fee could be absorbed by increases in sale prices and rents in the range of 1.6% for the apartment prototype and 2.8% for the townhome prototype.

Table 12 – Potential Market Adjustments to Absorb Illustrative Fee / Requirement Cost Levels			
	$10/SF	$15/SF	$20/SF
Single Family Detached Prototype			
Increase in Sale Price	1.4%	2.7%	4.1%
Decrease in Direct Costs	2.9%	5.6%	8.3%
Decrease in Land Values	9.2%	17.8%	26.4%
Townhome/Attached Prototype			
Increase in Sale Price	1.5%	2.8%	4.0%
Decrease in Direct Costs	3.1%	5.6%	8.1%
Decrease in Land Values	15.8%	28.6%	41.5%
Condominium Prototype			
Increase in Sale Price	1.0%	1.9%	2.7%
Decrease in Direct Costs	1.8%	3.3%	4.9%
Decrease in Land Values [1]	14.1%	25.6%	37.1%
Apartment Prototype			
Increase in Rents	0.9%	1.6%	2.3%
Decrease in Direct Costs	1.9%	3.5%	5.0%
Decrease in Land Values	15.8%	28.2%	40.7%

Note: Each of the above adjustments would independently be sufficient to absorb the fee / requirement cost increase. Depending upon the market cycle and other factors, a combination of the above market adjustments might be expected to contribute to absorbing a new fee.

[1] For the condominium prototype, the decrease in land values is based on the higher land value supported by the apartment prototype, which has a similar density.

Table 13
Feasibility Analysis: Ownership Prototypes
City of Hayward

	Single Family Detached Prototype				Townhomes/Attached Prototype				Condominiums (Stacked Flats) Prototype			
Acres	2.00 acres				2.00 acres				2.00 acres			
Units	20 units				40 units				100 units			
Density	10.0 du/acre				20.0 du/acre				50.0 du/acre			
Average Unit Size	2,500 sq.ft.				2,000 sq.ft.				1,000 sq.ft.			
Development Costs												
	$/NSF	$/Unit (rounded)	Total	%Directs	$/NSF	$/Unit (rounded)	Total	%Directs	$/NSF	$/Unit (rounded)	Total	%Directs
Land Acquisition	$0	$0	$0	0%	$0	$0	$0	0%	$0	$0	$0	0%
Directs (incl. Sitework)	$185	$462,500	$9,250,000	100%	$200	$400,000	$16,000,000	100%	$333	$332,500	$33,250,000	100%
Indirects												
A&E	$11	$28,000	$560,000	6%	$10	$20,000	$800,000	5%	$13	$13,300	$1,330,000	4%
Affordable Housing Fee	$5	$11,600	$231,000	2%	$4	$7,800	$310,000	2%	$4	$3,900	$387,000	1%
Other Fees & Permits	$21	$52,500	$1,050,000	11%	$21	$42,000	$1,680,000	11%	$35	$35,000	$3,500,000	11%
Taxes/Insurance/Legal	$15	$37,500	$750,000	8%	$19	$37,500	$1,500,000	9%	$15	$15,000	$1,500,000	5%
Sales & Marketing	$5	$12,500	$250,000	3%	$5	$10,000	$400,000	3%	$8	$7,500	$750,000	2%
Administrative/Other	$7	$18,500	$370,000	4%	$8	$16,000	$640,000	4%	$17	$16,600	$1,663,000	5%
Financing	$14	$33,800	$676,000	7%	$13	$26,400	$1,056,000	7%	$20	$19,900	$1,986,000	6%
Total Costs Excluding Land	$263	$656,900	$13,137,000	142%	$280	$559,700	$22,386,000	140%	$444	$443,700	$44,366,000	133%
Residual Land Value												
	$/NSF	$/Unit (rounded)	Total		$/NSF	$/Unit (rounded)	Total		$/NSF	$/Unit (rounded)	Total	
Market Rate Sales	$380	$950,000	$19,000,000		$400	$800,000	$32,000,000		$590	$590,000 [1]	$59,000,000	
(Less) Closing Costs 4%	($15)	($38,000)	($760,000)		($16)	($32,000)	($1,280,000)		($24)	($23,600)	($2,360,000)	
(Less) Profit Margin 12% 17%	($44)	($109,500)	($2,189,000)		($65)	($130,600)	($5,222,000)		($96)	($96,300)	($9,629,000)	
(Less) Development Costs excl. Land	($263)	($656,900)	($13,137,000)		($280)	($559,700)	($22,386,000)		($444)	($443,700)	($44,366,000)	
Residual Land Value	$58	$145,700	$2,914,000		$39	$77,800	$3,112,000		$27	$26,500	$2,645,000	
Residual Land Value/Acre			$1,457,000				$1,556,000				$1,322,500	
Residual Land Value/Land Sq.Ft.			$33				$36				$30	

[1] Sale price for stacked flat condominiums reflects price needed for financial feasibility, which is somewhat above current market prices.

Table 14
Feasibility Analysis: Apartment Prototype
City of Hayward

		Apartment Prototype			
Acres		2.00 acres			
Units		120 units			
Density		60.0 du/acre			
Average Unit Size		900 sq.ft.			
Development Costs					
		$/NSF	$/Unit (rounded)	Total	%Directs
Land Acquisition		$0	$0	$0	0%
Directs (incl. Sitework)		$329	$296,300	$35,550,000	100%
Indirects					
A&E		$13	$11,800	$1,420,000	4%
Affordable Housing Fee		$4	$3,300	$392,000	1%
Other Fees & Permits		$35	$31,500	$3,780,000	11%
Taxes/Insurance/Legal		$7	$6,700	$800,000	2%
Sales & Marketing		$6	$5,000	$600,000	2%
Administrative/Other		$16	$14,800	$1,778,000	5%
Financing		$14	$12,400	$1,492,000	4%
Total Costs Excluding Land		$424	$381,800	$45,812,000	129%
				$51,000,000	
Residual Land Value					
		$/NSF/Month	$/Unit/Month	Total	
Gross Rents		$3.11	$2,800	$4,032,000	
Other Income		$0.08	$70	$100,800	
(Less) Vacancy/Bad Debt	5%	($0)	($143)	($206,600)	
(Less) Op Ex		($1)	($500)	($720,000)	
(Less) Property Taxes		($0)	($415)	($598,000)	
NOI		$2	$1,811	$2,608,200	
Supported Investment	5.20%		$418,000	$50,160,000	
(Less) Costs excluding Land			($381,800)	($45,812,000)	
Residual Land Value			$36,200	$4,348,000	
Residual Land Value/Acre				$2,174,000	
Residual Land Value/Land Sq.Ft.				$50	

B. On-Site Compliance Cost Analysis

To assist the City in understanding the cost associated with providing affordable units onsite, KMA estimated the foregone revenue to the developer when units are restricted to affordable prices or rents; this is referred to as the 'onsite compliance cost.' This information is often useful as context when considering potential onsite and fee obligations.

KMA modeled the cost associated with complying with existing AHO requirements by providing affordable units onsite (10% onsite in single family detached projects and 7.5% onsite for attached for-sale and rental projects). In addition, the cost of setting aside each 1% of units as affordable was evaluated to assist in evaluating potential modified onsite requirement levels.

Findings of the compliance cost analysis are summarized in the table below. Supporting analysis is presented on Tables 16A to 16D. As shown, each 1% of units that are made affordable results in forgone revenue to the developer of between $2.05 and $3.64 per square foot or between $2,500 and $5,200 per unit. Hayward's existing on-site requirement / option equates to a cost of $15 to $27 per square foot depending on the prototype, which is far costlier than payment of current in-lieu / impact fees which range from $3.63 to $4.61 per square foot.

Table 15 – Onsite Compliance Cost Analysis

	Single Family Detached	*Townhomes*	*Stacked Condos*	*Apartments*
Affordability Level	Moderate	Moderate	Moderate	50% Low, 50% Very Low
Forgone Revenue Per Affordable Unit Provided	$524,200	$409,300	$247,100	$328,000
For Each 1% of Units Made Affordable				
Forgone Revenue Per Unit in Project	$5,242	$4,093	$2,471	$3,280
Forgone Revenue Per Square Foot in Project	$2.10	$2.05	$2.47	$3.64
Current Onsite Requirement / Option (10% detached, 7.5% attached)				
Forgone Revenue Per Unit in Project	$52,400	$30,700	$18,500	$24,600
Forgone Revenue Per Square Foot in Project	$20.96	$15.35	$18.50	$27.33

Tables 16A and 16B provide additional compliance cost findings at 100% AMI for ownership units and 80% of area median income for rental units. Each 1% of units provided at 110% of AMI is approximately equivalent in cost to providing 0.9% of units at 100% of AMI. For rentals, 1% of units split between very low and low are approximately equivalent in cost to provide as 1.36% of units at 80% of AMI.

TABLE 16A
COST OF ONSITE COMPLIANCE AND EQUIVALENT IN-LIEU FEES: FOR-SALE UNITS
CITY OF HAYWARD, CA

	Single Family Detached		Townhomes / Attached		Condominiums (Stacked Flats)	
Unit Size[1]	2,500 sq ft		2,000 sq ft		1,000 sq ft	
Number of Bedrooms	4		3		2	
Market Rate Prices [1]	***Per SF***	***Per Unit***	***Per SF***	***Per Unit***	***Per SF***	***Per Unit***
	$380	$950,000	$400	$800,000	$590	$590,000
Affordable Prices [2]		***Per Unit***		***Per Unit***		***Per Unit***
Moderate@110% AMI		$425,800		$390,700		$342,900
Moderate@100% AMI		$382,200		$350,300		$306,500
Affordability Gap [3]		***Per Unit***		***Per Unit***		***Per Unit***
Moderate@110% AMI		$524,200		$409,300		$247,100
Moderate@100% AMI		$567,800		$449,700		$283,500
Cost of Onsite Compliance	***Per SF***	***Per Unit***	***Per SF***	***Per Unit***	***Per SF***	***Per Unit***
Each 1% of Units						
Moderate@110% AMI	$2.10	$5,242	$2.05	$4,093	$2.47	$2,471
Moderate@100% AMI	$2.27	$5,678	$2.25	$4,497	$2.84	$2,835
Compliance Costs at 110% AMI						
Onsite Req.: 7.5% @ Moderate	$15.72	$39,300	**$15.35**	**$30,700**	**$18.50**	**$18,500**
Onsite Req.: 10% @ Moderate	**$20.96**	**$52,400**	$20.45	$40,900	$24.70	$24,700
Onsite Req.: 15% @ Moderate	$31.44	$78,600	$30.70	$61,400	$37.10	$37,100
Compliance Costs at 100% AMI						
Onsite Req.: 7.5% @ Median	$17.04	$42,600	$16.85	$33,700	$21.30	$21,300
Onsite Req.: 10% @ Median	$22.72	$56,800	$22.50	$45,000	$28.40	$28,400
Onsite Req.: 15% @ Median	$34.08	$85,200	$33.75	$67,500	$42.50	$42,500
On-site percentage at 100% AMI equivalent in cost to 1% @110% AMI		0.92%		0.91%		0.87%
Existing In-Lieu Fee	$4.61	$11,525	$3.87	$7,740	$3.87	$3,870

Shading denotes compliance costs for existing onsite percentage requirements

1. Prototype unit sizes and prices based on Residential Nexus Analysis market survey.
2. See Table 16C and 16D.
3. The difference between the market rate sales prices and the restricted affordable price.
4. Inclusionary requirement is 10% of units for detached projects and 7.5% for attached projects.

TABLE 16B
COST OF ON-SITE COMPLIANCE: RENTAL UNITS
CITY OF HAYWARD, CA

		Apartments
1	Gross Unit Size	900 sq ft
2	Number of Bedrooms	1.5
3	Household Size	2.5
	Market Rate	***Per Unit***
4	Rent per month	$2,800
5	Other Income	$70
6	Annual Rent	$34,440
7	(Less Vacancy Allowance @ 5%)	($1,722)
8	Annual Operating Expenses[4]	($10,980)
9	Annual Net Operating Income (NOI)	$21,738
10	Unit Value @ 5.2% Return on Cost	$418,000

	Affordable Income & Rents	***Very Low***	***Low Income @60% AMI***	***Low Income @80% AMI***
11	Household Income Limit [1]	$44,350	$49,665	$68,375
12	Gross Rent [2]	$1,109	$1,242	$1,709
14	(Less Utility Allowance)[3]	($80)	($80)	($80)
15	Net Rent	$1,029	$1,162	$1,629
16	Annual Rent	$12,345	$13,940	$19,553
13	(Less Vacancy Allowance @ 5%)	($617)	($697)	($978)
17	Annual Operating Expenses[4]	($7,200)	($7,500)	($8,500)
18	Annual Net Operating Income (NOI)	$4,528	$5,743	$10,075
19	Unit value @ 5.7% Return on Cost	$79,000	$101,000	$177,000
20	Gap in Unit Value	$339,000	$317,000	$241,000

	Onsite Cost Equivalents	***50% Low, 50% Very Low***	***Low Income @80% AMI***
	Cost Per Unit in Project		
21	For each 1% affordable	$3,280	$2,410
22	7.5% On-site Requirment	**$24,600**	$18,075
23	10% On-site Requirment	$32,800	$24,100
24	15% On-site Requirment	$49,200	$36,150
25	**Cost Per Square Foot in Project**		
26	For each 1% affordable	$3.64	$2.68
27	7.5% On-site Requirment	**$27.33**	$20.08
28	10% On-site Requirment	$36.44	$26.78
29	15% On-site Requirment	$54.67	$40.17

Shading denotes compliance costs for existing onsite option

Percent requirement at 80% AMI equivalent in cost to 1% requirement at Very Low and Low (60% AMI) **1.36%**

1. California Department of Housing & Community Development, 2017. Average of two and three-person households.
2. Calculated at 30% of household income.
3. Monthly utilities include direct-billed utilities and landlord reimbursements estimated based on County Housing Authority utility allowance schedule.
4. Assumes $6,000 in annual operating expenses plus property taxes estimated at 1.2% of value.
5. Includes a 0.5% return on cost premium as a reflection of lower rent growth potential of affordable units.

TABLE 16C
MODERATE INCOME HOME PRICES at 110% AMI
CITY OF HAYWARD

	CONDO	TOWNHOME	DETACHED
Unit Size	2-Bedroom	3-Bedroom	4-Bedroom
Household Size	3-person HH	4-person HH	5-person HH
Median Income - Alameda County 2017	$87,650	$97,400	$105,200
Annual Income @ 110%	$96,415	$107,140	$115,720
% Available for Housing Costs	35%	35%	35%
Income Available for Housing Costs	$33,745	$37,499	$40,502
(Less) Property Taxes	($4,459)	($5,083)	($5,538)
(Less) HOA	($3,600)	($3,000)	($1,800)
(Less) Utilities	($1,212)	($1,536)	($2,772)
(Less) Insurance	($343)	($391)	($426)
(Less) Mortgage Insurance	($2,814)	($3,205)	($3,494)
Income Available for Mortgage	$21,318	$24,285	$26,473
Mortgage Amount	$330,900	$377,000	$410,900
Down Payment (homebuyer cash)	$12,000	$13,700	$14,900
Affordable Home Price	$342,900	$390,700	$425,800
Key Assumptions			
- Mortgage Interest Rate	5.0%	5.0%	5.0%
- Down Payment	3.5%	3.5%	3.5%
- Property Taxes (% of sales price)	1.3%	1.3%	1.3%
- HOA (per month)	$300	$250	$150
- Utilities (per month)	$101	$128	$231
- Mortgage Insurance (% of loan amount)	0.85%	0.85%	0.85%

(1) Residential nexus analysis

(2) Utilities estimated based on utility allowance schedule from the Housing Authority of Alameda County.

TABLE 16D
MODERATE INCOME HOME PRICES at 100% AMI
CITY OF HAYWARD

	CONDO	TOWNHOME	DETACHED
Unit Size	2-Bedroom	3-Bedroom	4-Bedroom
Household Size	3-person HH	4-person HH	5-person HH
Median Income - Alameda County 2017	$87,650	$97,400	$105,200
Annual Income @ 100%	$87,650	$97,400	$105,200
% Available for Housing Costs	35%	35%	35%
Income Available for Housing Costs	$30,678	$34,090	$36,820
(Less) Property Taxes	($3,986)	($4,555)	($4,970)
(Less) HOA	($3,600)	($3,000)	($1,800)
(Less) Utilities	($1,212)	($1,536)	($2,772)
(Less) Insurance	($307)	($350)	($382)
(Less) Mortgage Insurance	($2,515)	($2,874)	($3,136)
Income Available for Mortgage	$19,058	$21,774	$23,760
Mortgage Amount	$295,800	$338,000	$368,800
Down Payment (homebuyer cash)	$10,700	$12,300	$13,400
Affordable Home Price	$306,500	$350,300	$382,200
Key Assumptions			
- Mortgage Interest Rate	5.0%	5.0%	5.0%
- Down Payment	3.5%	3.5%	3.5%
- Property Taxes (% of sales price)	1.3%	1.3%	1.3%
- HOA (per month)	$300	$250	$150
- Utilities (per month)	$101	$128	$231
- Mortgage Insurance (% of loan amount)	0.85%	0.85%	0.85%

(1) Residential nexus analysis

(2) Utilities estimated based on utility allowance schedule from the Housing Authority of Alameda County.

C. Residential Affordable Housing Requirements in Other Jurisdictions

The affordable housing requirements adopted by other jurisdictions are almost always of interest to decision making bodies. Cities inevitably want to know what their neighbors have in place for affordable housing requirements, and often want to examine other cities that are viewed as comparable on some level. The body of information on other programs not only presents what others are adopting, but also illustrates the broad range in program design and customized features available to meet local needs.

A survey of affordable housing requirements in eighteen jurisdictions was prepared for purposes of the multi-jurisdiction nexus study in which the City of Hayward participated (for purposes of the non-residential scope of services only). The comparison jurisdictions were selected by the participants in that effort. The survey was prepared in 2016 and is incorporated in this report with limited updating.

Table 17 is four-page chart which summarizes the key features of the eighteen cities in the survey. The chart was designed to focus on the major components of each city's program that would be most relevant to decision making, primarily the thresholds, the fee levels and on-site affordable unit requirements.

1. Findings from the Survey

Thresholds for On-Site Affordable Requirement

- Whether or not for-sale development projects have the choice "as of right" between paying a fee or doing on-site units is a critical feature of any program. In the eight Santa Clara jurisdictions, six require on-site units and offer no fee "buy out" without a special City Council procedure. Only San Jose and Milpitas offer the fee choice at this time. In contrast, of the ten Alameda jurisdictions, most offer fee payment "as of right."

- Most fee options are less costly to the developer than providing on-site units. High fees are necessary if the choice between building units or paying fees is to be at all competitive. The high fee cities, such as Fremont, aim to present a real choice and achieve some on-site compliance units as well as fee revenues.

- With the loss of redevelopment and tax increment resources dedicated to housing, many cities have revised their programs to generate more fee revenues. Programs can be revised so as to alter options or incentives for projects to provide on-site units versus pay a fee based on the City's preferences.

- The loss of redevelopment has also motivated some cities to lower minimum project sizes to collect fees on very small projects, even single units. Several Santa Clara cities

in the chart have adjusted their thresholds down to three to five units for fee payment, and the recently updated Cupertino and Oakland programs go down to single units as do proposed requirements for Union City. The nexus analysis fully demonstrates the impact generated by single units, and as a result, some cities view charging very small projects and single units a matter of fairness and equity in an "everybody contributes" approach to meeting affordable housing challenges.

- Following the *Palmer* decision, impact fees have been the only avenue for requiring rental projects to mitigate their impacts on the need for affordable housing. On-site affordable units must be allowed as an alternative to fee payment if consistent with the Costa Hawkins Act and provided in exchange for a financial contribution or regulatory incentive such as a density bonus.

Fee Levels

- Impact fee levels for rentals in the cities of north and west Santa Clara County cluster in the $15 to $20 per square foot range for rentals, notably San Jose, Mountain View, Sunnyvale, and Cupertino. Most other cities have not yet adopted impact fees on rentals.

- Fees on for sale units, where permitted, in the Santa Clara cities reflect a range of approaches and levels. Several Silicon Valley cities charge fees as a percent of sales price, a practice not used much outside of Silicon Valley. The percent of sales prices reflects the higher impacts of higher priced units, borne out in the nexus analysis. The approach also scales fees in proportion to the revenue projects would forgo were a portion of units to be made affordable on-site.

- In the East Bay, Fremont is notable for its higher fees and obligation to provide both units and pay fees. Oakland is a new adoption that will phase in fees up to $23,000 per market rate unit. Berkeley recently increased its fees to $34,000 per unit or add $3,000 more if paid at certificate of occupancy. In May, the City Council of Union City directed staff to come back with an ordinance at $22 per square foot for ownership projects and $14 per square foot for rentals (at full phase-in).

- East of the hills, some programs like Pleasanton, have been in place for decades but are more modest than most of the newer ones. Dublin is, in many ways, its own special case, with vigorous development activity and affordable unit requirements.

On-Site Requirements

- The Santa Clara cities (excluding Milpitas) have programs in the 10% to 20% range, with 15% most common.

- For the Santa Clara County programs, the affordability level applicable to for-sale projects is usually in the moderate income range, with pricing of on-site units ranging from 90% to 120% AMI, depending on the city. A few cities do seek some units down to Low Income.

- In Alameda cities, on-site requirements are most commonly at the 15% level. Berkeley has a 20% requirement, Oakland has both a 5% and a 10% option depending on the depth of affordability. The Fremont percentage is lower but a fee is owed in addition to on-site units.

2. Other General Comments

- Impact / in-lieu fees are presented at adopted levels. Where a multi-year phase-in has been adopted, such as the new Oakland program, the full phase in amount is shown with clarification in the bottom comment section of the chart. Fees on rentals are included only when they have been adopted as impact fees, following the *Palmer* California Supreme Court ruling which precludes on-site requirements and their in-lieu fee alternatives.

- Fees are expressed in different ways from one city to the next. Some fees are charged per square foot, some are a flat fee per market rate unit, and some are charged per affordable unit owed, which is almost always over $100,000 in the Bay Area. To convert per unit owed to per market rate unit, one can multiply the per unit amount by the percentage requirement.

- On-Site Requirement/Option for Rentals. Many city codes continue to include on-site requirement language for rental projects because codes have not been updated since the *Palmer* ruling and requirements are not being applied. These requirements are not included in the chart.

- The income levels of the affordable units that are required are summarized in terms of both “eligibility” or “qualifying” levels and the pricing level that is used to establish the purchase price or rent level of the unit. The pricing level is the critical one insofar as the developer’s obligation is concerned. The most typical choice for pricing level is to be consistent with the affordable housing cost definitions in the California Health & Safety Code 50052.5 and 50053.

- Virtually all cities that have on-site requirements for for-sale residential projects without the choice of fee payment, do allow fee payment with special City Council approval. Therefore, the chart notes this feature only by way of a footnote. The City’s practice in granting such approvals may be more consequential than what may be written.

For more complete information on the programs, please consult the website and code language of the individual cities.

TABLE 17
COMPARISON OF AFFORDABLE HOUSING REQUIREMENTS - RESIDENTIAL
ALAMEDA COUNTY CITIES

	Albany	Fremont	Hayward	San Leandro	Union City
Year Adopted / Updated	2005	Est. 2002, update 2015, full phase-in 2017	Update 2015	2004	Est. 2001, update 2006
Minimum Project Size					
For In-lieu/Impact Fee	**FS:** 5 units	**FS/R:** 2 units	**FS/R:** 20 units	**FS:** 2 units	**FS/R:** 1 unit
For Build Requirement	**FS:** 7 units	no build req.	no build req.	**FS:** 7 units	no build req.
Impact / In-Lieu Fee	**FS:** (Market Value - Affordable Price) x units owed	**FS:** *Attached* $27.00 no units, $18.50 w/ aff units *Detached* $26.00 no units, $17.50 w/ aff units, **R:** $17.50 no map, $27.00 w/ map	**FS:** *Attached* $3.87/sf, *Detached* $4.61/sf **R:** $3.63/sf	**FS:** (Median Sale Price - Affordable Price) x units owed	**Council Direction for Updated Ordinance (April 2017):** FS: $22/SF R: $14/SF
Onsite Requirement/Option					
Percent of Total Units	**FS:** 15%	**FS:** *Attached* 3.5% plus $18.50/sf *Detached* 4.5% plus $17.50/sf **R:** 12.9%	**FS:** *Attached* 7.5%, *Detached* 10% **R:** *Attached* 7.5%, *Detached* 10%	**FS:** 15%	**FS:** 15%
Income Level for Qualification	FS: <10 units: Low 10+ units: 50% Low, 50% Very Low	FS: Moderate Income R: 19% Extremely Low, 33% Very Low, 25% Low, 24% Moderate	FS: Moderate Income R: 50% Low, 50% Very Low	FS: 60% Moderate, 40% Low	FS: 60% Moderate, 30% Median, 10% Low.
Income Level for Pricing(% AMI)	Not specified.	FS: Moderate @ 110% AMI (120% w/approval) R: Low @ 60% AMI, Very Low @ 50% AMI, Extremely Low @ 30% AMI	**FS:** Moderate **@** 110% AMI **R:** Low @ 60% AMI Very Low @ 50% AMI	FS: Moderate **@** 110% AMI, Low @ 70% AMI	FS: Moderate **@** 110% AMI, Median not specified (80-100%) Low @ 70% AMI
Fractional Units	<0.5: pay fee, >0.5: provide unit	pay fee or provide unit	pay fee or provide unit	<0.5: round down, >0.5: round up	pay fee or provide unit
Comments		Full phase-in levels shown. Rental projects with a subdivision map pay the higher fee. FS projects req. to provide onsite units and pay fee.		Fee calculated based on current median sales price.	Reflects Council direction for updates to ordinance that have not yet been adopted. Fee applies to additions over 500 square feet.

Abbreviations:
R = Rental
du = Dwelling Unit
FS = For Sale
Ac = Acre
/sf = per square foot
AMI =Area Median Income
MF = Multi-Family
SF = Single Family

Notes: This chart presents an overview, and as a result, terms are simplified. For use other than general comparison, please consult the code and staff of the jurisdiction.
Virtually all cities that do not allow fee payment by right allow developers to seek Council approval of fee payment instead of on-site units, in addition to providing options for off-site construction and land dedication.

TABLE 17
COMPARISON OF AFFORDABLE HOUSING REQUIREMENTS - RESIDENTIAL
ALAMEDA COUNTY CITIES

	Alameda (city)	Berkeley	Dublin	Oakland	Pleasanton
Year Adopted / Updated	2003	Est. 1986, rental fee 2011, update adopted 2017	Est. 1997, update 2005	2016	Est. 1978, update 2000.
Minimum Project Size					
For In-lieu/Impact Fee	**FS:** 5 units	**FS/R:** 5 units	**FS/R:** 20 units	**FS/R:** 1 unit	**FS/R:** 15 units
For Build Requirement	**FS:** 10 units	no build req.	**FS/R:** 20 units (partial)	no build req.	no build req.
Impact / In-Lieu Fee	**FS:** $19,076/du	**FS:** 62.5% x (Sale Price - Affordable Price) x units owed **R:** $34,000/du or $37,000/du if paid at C/O	**FS/R:** $127,061 per aff unit owed (in addition to on-site)	**FS/R:** *MF* $12,000-$22,000, *SF Attached* $8,000-$20,000, *SF Detached* $8,000-$23,000	**FS/R:** *MF* $2,783/du, *SF* <1,500 sq ft: $2,783/du, >1,500 sq ft: $11,228/du
Onsite Requirement/Option					
Percent of Total Units	**FS:** 15%	**FS/R:** 20%	**FS/R:** 7.5%, plus fee (12.5% without fee)	**FS/R:** *Option A* 5% or *Option B* 10%	**FS/R:** *MF* 15% *SF* 20%
Income Level for Qualification	**FS**: 47% Moderate, 27% Low, 27% Very Low	FS: Low R: *Current* Very Low *Proposed* 1/2 Very Low, 1/2 Low	FS: 60% Moderate, 40% Low R: 50% Moderate, 20% Low, 30% Very Low	FS/R: *Option A* Very Low *Option B* Low and Moderate	FS: *MF* Low *SF* Moderate
Income Level for Pricing(% AMI)	**FS:** Moderate @ 110%, Low @ 70%, Very Low @ 50%	**FS:** Low @ 80% **R:** Low at 81%, Very Low at 50%.	**FS:** Moderate @ 110%, Low @ 70% R: Moderate @ 110%, Low @ 80%, Very Low @ 50%	FS: Moderate @ 110%, Low @ 70%, Very Low @ 50% R: Moderate 110%, Low @ 60%, Very Low @ 50%	**FS:** *MF* 80% AMI *SF* 120% AMI
Fractional Units	<0.5: round down, >0.5: round up	pay fee	<0.5: round down, >0.5: round up	pay fee or provide unit	<0.5: round down, >0.5: round up
Comments				Fees vary by neighborhood. Fees phased in through 2020. Full fee levels shown. On-site: May choose Option A or B. Based on draft ordinance prepared for April 19, 2016 council meeting.	

Abbreviations:
R = Rental
du = Dwelling Unit
FS = For Sale
Ac = Acre
/sf = per square foot
AMI =Area Median Income
MF = Multi-Family
SF = Single Family

Notes: This chart presents an overview, and as a result, terms are simplified. For use other than general comparison, please consult the code and staff of the jurisdiction.
Virtually all cities that do not allow fee payment by right allow developers to seek Council approval of fee payment instead of on-site units, in addition to providing options for off-site construction and land dedication.

TABLE 17
COMPARISON OF AFFORDABLE HOUSING REQUIREMENTS - RESIDENTIAL
SANTA CLARA COUNTY CITIES

	Campbell	Los Altos	Milpitas	Santa Clara City
Year Adopted / Updated	2006	Est. 1995, update 2009	2015	Est. 1991, update 2006
Minimum Project Size				
For In-lieu/Impact Fee	**FS,** <6du/Ac: 10 units FS, >6 du/Ac: n/a	n/a	**FS/R:** 5 units	n/a
For Build Requirement	**FS,** <6du/Ac: n/a **FS,** >6du/Ac: 10 units	**FS:** 5 units	no build req.	**FS:** 10 units
Impact / In-Lieu Fee	**FS:** $34.50 /sf	none	**FS/R:** 5% building permit value	**FS:** *Fractional units only* (Market Value - Affordable Price) x fractional unit
Onsite Requirement/Option				
Percent of Total Units	**FS:** 15%	**FS:** 10%	**FS/R:** 5%	**FS:** 10%
Income Level for Qualification	FS: Low and Moderate	FS: Moderate If <10 units, one unit at Low.	FS/R: Low and Very Low	**FS:** Very Low to Moderate
Income Level for Pricing(% AMI)	FS: Moderate @ 110% Low @ 70%	Not Specified.	Not specified.	Not specified.
Fractional Units	<0.5: round down, >0.5: round up	provide unit	not specified	pay fee or provide unit
Comments	code does not specify allocation between Low and Moderate; staff indicates approximately 50/50 allocation has been the experience.	<4 du/Ac: no requirement. Also, requirements may be waived by City Council for projects of 9 units or less.	In-lieu/impact fee introduced as temporary measure while City prepares formal nexus study. Fee has not yet been assessed.	Policy established in the City's General Plan.

Abbreviations:
R = Rental
du = Dwelling Unit
FS = For Sale
Ac = Acre
/sf = per square foot
AMI =Area Median Income
MF = Multi-Family
SF = Single Family

1. Santa Clara County and Saratoga do not currently have an inclusionary housing requirement.

Notes: This chart presents an overview, and as a result, terms are simplified. For use other than general comparison, please consult the code and staff of the jurisdiction.
Virtually all cities that do not allow fee payment by right allow developers to seek Council approval of fee payment instead of on-site units, in addition to providing options for off-site construction and land dedication.

TABLE 17
COMPARISON OF AFFORDABLE HOUSING REQUIREMENTS - RESIDENTIAL
SANTA CLARA COUNTY CITIES

	Cupertino	Mountain View	San Jose	Sunnyvale
Year Adopted / Updated	Est. 1992, update 2015	Est. 1999, rental impact fee in 2012, update 2015	Est. 2010. Rental Fee 2014.	Update 2015
Minimum Project Size				
For In-lieu/Impact Fee	**FS/R:** 1 unit	**FS:** 3 units **R:** 5 units **Mixed FS/R:** 6 units	**FS:** 20 units **R:** 3 units	**FS:** 8 units **R:** 4 units
For Build Requirement	**FS:** 7 units	**FS:** 10 units	no build req.	**FS:** 20 units
Impact / In-Lieu Fee	**FS:** *Detached* $15/sf, *Attached* $16.50/sf, *MF* $20/sf **R:** *<35 du/Ac* $20/sf, *>35 du/Ac* $25/sf	**FS:** 3% of sales price **R:** $17/sf	**FS:** based on affordability gap **R:** $17 /sf	**FS:** 7% of sales price **R:** $8.50/sf (4-7 units), $17/sf (8+ units)
Onsite Requirement/Option				
Percent of Total Units	**FS/R:** 15%	**FS/R:** 10%	**FS:** 15%	**FS:** 12.5% **R:** On-site credits (see below)
Income Level for Qualification	FS: 1/2 Median 1/2 Moderate R: 40% Low, 60% Very Low	FS: Median R: Low	FS: Moderate	FS: Moderate
Income Level for Pricing(% AMI)	**FS:** Moderate @ 110%, Median @ 90% **R:** Low @ 60%, Very Low @ 50% AMI	**FS:** One unit: 90% AMI Multiple units: 80 - 100% AMI **R:** Ranges btwn 50-80% AMI	Moderate @ 110% AMI	Moderate @ 100% AMI
Fractional Units	<.5 unit owed: pay fee .5+ unit owed: round up	pay fee or provide unit	**R:** pay fee **FS:** pay fee or provide unit	pay fee or provide unit
Comments			Inclusionary zoning to be reinstated 2016. Downtown highrises exempt from impact fee for five years.	On-site rental: developer credited $300,000/du (Very Low), $150,000/du (Low). Projects with fewer than 20 units are eligible to pay in-lieu fee.

Abbreviations:
R = Rental
du = Dwelling Unit
FS = For Sale
Ac = Acre
/sf = per square foot
AMI =Area Median Income
MF = Multi-Family
SF = Single Family

Notes: This chart presents an overview, and as a result, terms are simplified. For use other than general comparison, please consult the code and staff of the jurisdiction.
Virtually all cities that do not allow fee payment by right allow developers to seek Council approval of fee payment instead of on-site units, in addition to providing options for off-site construction and land dedication.

KEYSER MARSTON ASSOCIATES

ATTACHMENT A

RESIDENTIAL NEXUS ANALYSIS

Prepared for:
City of Hayward

Prepared by:
Keyser Marston Associates, Inc.

October 31, 2017

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I. INTRODUCTION

The following report is a Residential Nexus Analysis, an analysis of the linkages between the development of new residential units and the need for additional affordable housing in the City of Hayward. The report has been prepared by Keyser Marston Associates, Inc. (KMA) pursuant to a contract with the City of Hayward.

Background, Context and Use of the Analysis

The analysis addresses market rate residential projects in Hayward and the various types of units that are subject to the City's Affordable Housing Ordinance (AHO) at this time and potentially in the future. The nexus analysis quantifies the linkages between new market rate units and the demand for affordable housing in Hayward.

The City of Hayward's inclusionary program was first established in 2003 and has been updated twice since it was originally adopted. For-sale projects of twenty or more units are required to provide affordable units on-site or pay an in-lieu fee instead. Attached for-sale projects must provide 7.5% of units as affordable while detached projects must provide 10% of units affordable to households at Moderate Income. The program has an in-lieu fee alternative which is permitted by right.

The requirement for rental projects is to pay an impact fee. Affordable units may be provided on-site as an alternative to paying the impact fee. The on-site option for rental projects is to provide 7.5% of units as affordable split between Low and Very Low-Income units[1].

Hayward's current fees are:

- *Attached For-Sale Units*: $3.87 per square foot if paid at building permit or $4.28 per square foot if paid at certificate of occupancy; and

- *Detached For-Sale Units*: $4.61 per square foot if paid at building permit or $5.06 per square foot if paid at certificate of occupancy.

- *Rentals*: $3.63 per square foot if paid at building permit or $3.99 per square foot if paid at certificate of occupancy.

The nexus analysis provided herein enables the City to proceed with an update of the housing impact fees applicable to residential development in the City of Hayward. The conclusions of the analysis represent maximum supportable or legally defensible impact fee levels based on the

[1] For detached rentals, which are presumably rare, the on-site percentage is 10%.

impact of new residential development on the need for affordable housing. Findings are not recommended fee levels.

It should be noted that requirements need not be bound by the findings of this nexus analysis in accordance with the ruling in *C.B.I.A.*, described below. For small projects that would owe less than one onsite affordable unit, it is recommended that in-lieu fees be kept within the nexus maximums given on-site compliance with inclusionary requirements may not be practical and so the fee becomes the primary compliance option.

Background on Key Legal Cases

The following provides background regarding two key legal cases pertaining to inclusionary programs which in recent years have motivated many California cities to undertake residential nexus studies. This section is intended as general background only; nothing in this report should be interpreted as providing specific legal guidance, which KMA is not qualified to provide.

The *Palmer* case (Palmer/Sixth Street Properties L.P. v. City of Los Angeles [2009] 175 Cal. App. 4th 1396) was decided in 2009 and precluded California cities from requiring long term rent restrictions or inclusionary requirements on rental units. Since the *Palmer* ruling, many California cities have adopted affordable housing impact fees on rental projects supported by residential nexus studies similar to this one. AB 1505, enacted on September 29th 2017, restores the ability to require on-site affordable units within rental projects.

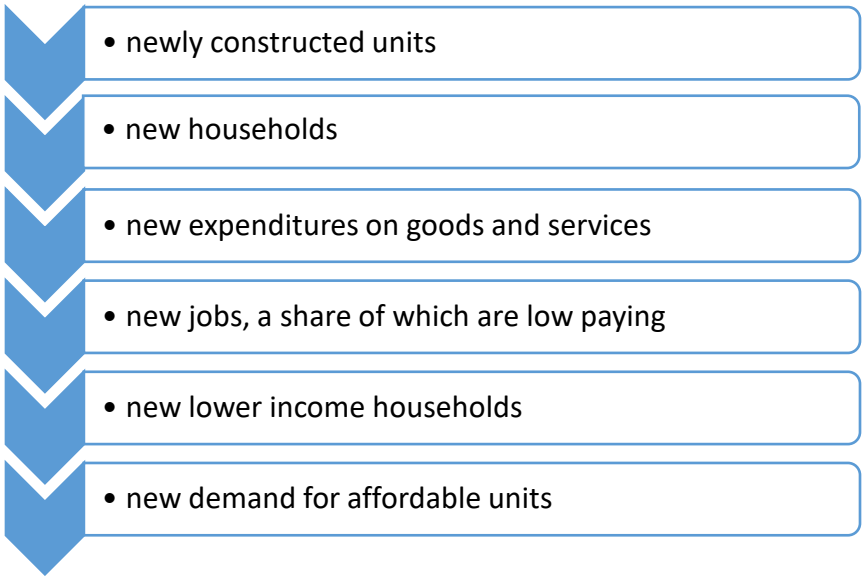
In *C.B.I.A.*, (California Building Industry Association v. City of San Jose, California Supreme Court Case No. S212072, June 15, 2015), also referred to as the San Jose Case, the California Building Industry Association challenged the City of San Jose's newly adopted inclusionary program. A core contention of C.B.I.A. was that the City's inclusionary program constituted an exaction that required a nexus study to support it. The case was pending in the courts from 2010 through February 2016. Ultimately, the case was decided by the California Supreme Court in favor of the City of San Jose, finding San Jose's inclusionary program to be a valid exercise of the City's power to regulate land use and not an exaction. The U.S. Supreme Court denied C.B.I.A.'s petition to review the case. While the case was pending, there was speculation that the courts would rule in favor of C.B.I.A. and this possibility was one of the motivations for cities to prepare residential nexus studies as an additional "backup" support measure for inclusionary programs.

The Nexus Concept

A residential nexus analysis demonstrates and quantifies the impact of new market rate housing development on the demand for affordable housing. The underlying nexus concept is that the newly constructed market rate units represent net new households in Hayward. These households represent new income in Hayward that will consume goods and services, either through purchases of goods and services or 'consumption' of government services. New

consumption translates to jobs; a portion of the jobs are at lower compensation levels; low compensation jobs relate to lower income households that cannot afford market rate units in Hayward and therefore need affordable housing.

Nexus Analysis Concept



Methodology and Models Used

The nexus analysis methodology starts with the sales price or rental rate of a new market rate residential unit, and moves through a series of linkages to the gross income of the household that purchased or rented the unit, the income available for expenditures on goods and services, the jobs associated with the purchases and delivery of those services, the income of the workers doings those jobs, the household income of the workers and, ultimately, the affordability level of the housing needed by the worker households. The steps of the analysis from household income available for expenditures to jobs generated were performed using the IMPLAN model, a model widely used for the past 35 years to quantify the impacts of changes in a local economy, including employment impacts from changes in personal income. From job generation by industry, KMA used its own jobs housing nexus model to quantify the income of worker households by affordability level.

To illustrate the linkages by looking at a simplified example, we can take an average household that buys a house at a certain price. From that price, we estimate the gross income of the household (from mortgage rates and lending practices) and the portion of income available for expenditures. Households will “purchase” or consume a range of goods and services, such as purchases at the supermarket or services at the bank. Purchases in the local economy in turn generate employment. The jobs generated are at different compensation levels. Some of the

jobs are low paying and as a result, even when there is more than one worker in the household, there are some lower and moderate-income households who cannot afford market rate housing in Hayward.

The IMPLAN model quantifies jobs generated at establishments that serve new residents directly (e.g., supermarkets, banks or schools), jobs generated by increased demand at firms which service or supply these establishments, and jobs generated when the new employees spend their wages in the local economy and generate additional jobs. The IMPLAN model estimates the total impact combined.

Net New Underlying Assumption

An underlying assumption of the analysis is that households that purchase or rent new units represent net new households in Hayward. If purchasers or renters have relocated from elsewhere in the city, vacancies have been created that will be filled. An adjustment to new construction of units would be warranted if Hayward were experiencing demolitions or loss of existing housing inventory. However, the rate of housing unit removal is so low as to not warrant an adjustment or offset.

On an individual project basis, if existing units are removed to redevelop a site to higher density, then there could be a need for recognition of the existing households in that all new units might not represent net new households, depending on the program design and number of units removed relative to new units.

Since the analysis addresses net new households in Hayward and the impacts generated by their consumption expenditures, it quantifies net new demands for affordable units to accommodate new worker households. As such, the impact results do not address nor in any way include existing deficiencies in the supply of affordable housing.

Geographic Area of Impact

The analysis quantifies impacts occurring within Alameda County. While much of the impact will occur within Hayward, some impacts will be experienced elsewhere in the county and beyond. The IMPLAN model computes the jobs generated within the county and sorts out those that occur beyond the county boundaries. The KMA Jobs Housing Nexus Model analyzes the income structure of jobs and their worker households, without assumptions as to where the worker households live.

In summary, the KMA nexus analysis quantifies all the job impacts occurring within Alameda County and related worker households. Job impacts, like most types of impacts, occur irrespective of political boundaries. And like other types of impact analyses, such as traffic, impacts beyond city boundaries are experienced, are relevant, and are important. See the

Addendum: Additional Background and Notes on Specific Assumptions at the end of this report for further discussion.

Market Rate Residential Project Types

Four prototypical residential project types were selected by the City and KMA for analysis in this nexus study. The prototypes were intended to represent the range of product types currently being built in Hayward or which are expected in the future including:

- Single Family Detached;
- Townhome;
- Condominium; and,
- Apartment.

Affordability Tiers

The nexus analysis addresses the following four income or affordability tiers:

- Extremely Low Income: households earning up to 30% Area Median Income (AMI);
- Very Low Income: households earning over 30% AMI up to 50% of AMI;
- Low Income: households earning over 50% AMI up to 80% of AMI; and,
- Moderate Income: households earning over 80% AMI up to 120% of AMI.

Report Organization

The report is organized into the following sections:

- Section A presents information regarding the prototypical new market rate residential units and the estimated household income of purchases or renters of those units.

- Section B describes the IMPLAN model, which is used in the nexus analysis to translate household income into the estimated number of jobs in retail, restaurants, healthcare, and other sectors serving new residents.

- Section C presents the linkage between employment growth associated with residential development and the need for new lower income housing units required in each of the four income categories.

- Section D quantifies the nexus or mitigation cost based on the cost of delivering affordable units to new worker households in each of the four income categories.
- An Addendum section provides a supplemental discussion of specific factors in relation to the nexus concept.

- Appendix A contains the market survey.

- Appendix B includes detailed tables on worker occupations and compensation levels, which are a key input into the analysis.

Disclaimers

This report has been prepared using the best and most recent data available at the time of the analysis. Local data and sources were used wherever possible. Major sources include the U.S. Census Bureau's American Community Survey, California Employment Development Department (EDD) and the IMPLAN model. While we believe all sources utilized are sufficiently sound and accurate for the purposes of this analysis, we cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these and other sources.

II. RESIDENTIAL NEXUS ANALYSIS

A. Market Rate Units and Household Income

This section describes the prototypical market rate residential units and the income of the purchaser and renter households. Market rate prototypes are representative of new residential units currently being built in Hayward or that are likely to be built in Hayward over the next five to ten years. Household income is estimated based on the amount necessary for the mortgage or rent payments associated with the prototypical new market rate units and becomes the basis for the input to the IMPLAN model. These are the starting points of the chain of linkages that connect new market rate units to additional demand for affordable residential units.

This section presents a summary of the market rate prototypes and the estimated household income of purchasers or renters of the market rate units.

Recent Housing Market Activity and Prototypical Units

KMA worked with City staff to select four representative development prototypes envisioned to be developed in Hayward in the future based on projects proposed and recently built in the City. KMA then undertook a market survey of residential projects to estimate current sale prices and rent levels. More details on the market survey can be found in Appendix A.

At the time of the market survey in mid-July 2017, there were 12 new for-sale residential developments being marketed in Hayward. Asking prices for these units, combined with recent closed home sales in the market, formed the basis for the pricing in the nexus analysis. For market rents for new apartment developments in Hayward, KMA performed a survey of asking apartment rents in select properties in Hayward and neighboring jurisdictions.

The four residential prototypes are summarized in the table below. The main objective of the survey was to review current market sales prices or rents, per unit and per square foot, for the various residential project types in Hayward.

It is important to note that the residential prototypes analysis is intended to reflect average or typical residential projects in the local market rather than any specific project. It would be expected that the characteristics and pricing of specific projects would vary to some degree from the residential prototypes analyzed. In summary, the residential prototypes analyzed in the nexus analysis are as follows:

Hayward Residential Prototypes				
	Typical Density	*Average Unit Size*	*Average Price/Rent*	*Price/Rent $/SF*
For-Sale Prototypes				
1) Single Family Detached	10 du/acre	2,500 sq. ft.	$950,000	$380/SF
2) Townhomes/Attached	20 du/acre	2,000 sq. ft.	$800,000	$400/SF
3) Condominiums (Stacked Flats)	50 du/acre	1,000 sq. ft.	$590,000	$590/SF
Rental Prototype				
4) Apartments	60 du/acre	900 sq. ft.	$2,800	$3.11/SF

Source: KMA market study; see Appendix A.

Income of Housing Unit Purchaser or Renter

After the prototypes are established, the next step in the analysis is to determine the income of the purchasing or renting households in the prototypical units.

Ownership Units

To make the determination for ownership units, terms for the purchase of residential units used in the analysis are slightly less favorable than what can be achieved at the current time since current terms are not likely to endure. The selected terms for the analysis are: a down-payment of 20% which is representative of new purchase loans originated locally.[2] A 30-year fixed rate loan at a 5% interest is assumed. The interest rate at 5% reflects a longer term average rate based on data for the last fifteen years from June 2002 to June 2017.[3] An interest rate premium of 0.25% is added to non-conforming loans over $636,150 (jumbo loans). Tables A-1 to A-3 at the end of this section provide the details.

All ownership product types include an estimate of homeowners' insurance, homeowner association dues, and property taxes. These are included along with the mortgage payment as part of housing expenses for purposes of determining mortgage eligibility.[4] The analysis estimates gross household income based on the assumption that these housing costs represent, on average, approximately 35% of gross income. The assumption that housing expenses represent

[2] Reflects the median down payment for new purchase loans originated in zip codes corresponding to Alameda and Santa Clara Counties derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

[3] Based on Freddie Mac Primary Mortgage Market Survey. Reflects weekly average rates for 30 year fixed rate mortgages during the period from 6/2002 through 6/2017 applicable to the West Region and rounded to the nearest whole percentage.

[4] Housing expenses are combined with other debt payments such as credit cards and auto loans to compute a Debt To Income (DTI) ratio which is a key criteria used for determining mortgage eligibility.

35% of gross income is reflective of the local average for new purchase loans[5] and is consistent with criteria used by lenders to determine mortgage eligibility.[6]

Apartment Units

Household income for renter households is estimated based on the assumption that housing costs, including rent and utilities, represents on average 30% of gross household income. The 30% factor was selected for consistency with the California Health and Safety Code standard for relating income to affordable rent levels.[7] The resulting relationship is that annual household income is 3.3 times annual rent.

The estimated gross household incomes of the purchasers or renters of the prototype units are calculated in Tables A-1 through A-4 and summarized below.

Gross Household Income				
	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Gross Household Income	$187,000	$162,000	$121,000	$117,000

Income Available for Expenditures

The input into the IMPLAN model used in this analysis is the net income available for expenditures. To arrive at income available for expenditures, gross income must be adjusted for Federal and State income taxes, contributions to Social Security and Medicare, savings, and payments on household debt. Per KMA correspondence with the producers of the IMPLAN model (IMPLAN Group LLC), other taxes including sales tax, gas tax, and property tax are handled internally within the model as part of the analysis of expenditures. Payroll deduction for medical benefits and pre-tax medical expenditures are also handled internally within the model. Housing costs are addressed separately, as described below, and so are not deducted as part of this adjustment step. Table A-5 at the end of this section shows the calculation of income available for expenditures.

[5] Freddie Mac data on new purchase loans originated in zip codes corresponding to Santa Clara and Alameda Counties for the 1st Quarter of 2015 indicates an average debt to income ratio of 37%; however, most households have other forms of debt such as credit cards, student loans, and auto loans that are included as part of this ratio and the ratio considering housing costs only would be lower. Application of a 35% ratio is also consistent with the California Health and Safety Code standard for relating income to housing costs for ownership units.

[6] Fannie Mae mortgage underwriting eligibility criteria establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria; however, most households have other forms of debt such as credit cards, student loans, and auto loans that would be considered as part of this ratio.

[7] Health and Safety Code Section 50052.5 defines affordable rent levels based on 30% of income.

Income available for expenditures is estimated at approximately 67% to 68% of gross income, depending on the market rate prototype. The estimates are based on a review of data from the Internal Revenue Service and California Franchise Tax Board tax tables. Per the Internal Revenue Service, households earning between $100,000 and $200,000 per year who itemize deductions on their tax returns will pay an average of 12.2% of gross income for federal taxes. Residents of the market rate rental units are estimated to pay an average of 14.0% of gross income in federal income taxes, the average for households in the $100,000 to $200,000 income range not itemizing deductions on their taxes. State taxes are estimated to range from 3.7% to 4.7% of gross income, based on tax rates per the California Franchise Tax Board. The employee share of FICA payroll taxes for Social Security and Medicare is 7.65% of gross income. A ceiling of $127,200 per employee applies to the 6.2% Social Security portion of this tax rate.

Savings and repayment of household debt represent another necessary adjustment to gross income. Savings includes various IRA and 401 K type programs as well as non-retirement household savings and investments. Debt repayment includes auto loans, credit cards, and all other non-mortgage debt. Savings and repayment of debt are estimated to represent a combined 8% of gross income based on a 20-year average derived from United States Bureau of Economic Analysis data.

The percentage of income available for expenditure for input into the IMPLAN model is prior to deducting housing costs. The reason is for consistency with the IMPLAN model, which defines housing costs as expenditures. The IMPLAN model addresses the fact that expenditures on housing do not generate employment to the degree other expenditures such as retail or restaurants do, but there is some limited maintenance and property management employment generated.

After deducting income taxes, Social Security, Medicare, savings, and repayment of debt, for purchasers of one of the new ownership prototypes, the estimated income available for expenditures is 67% - 68%. These are the factors used to adjust from gross income to the income available for expenditures for input into the IMPLAN model. As indicated above, other forms of taxation such as property tax are handled internally within the IMPLAN model.

Another adjustment made to spending is to account for standard operational vacancy in rental units of 5%, a level of vacancy considered average for rental units in a healthy market. A comparable adjustment is not applied to the ownership units as newly built ownership units are anticipated to have only a nominal level of vacancy.

Estimates of household income available for expenditures are presented below:

Income Available for Expenditures				
	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Gross Household Income	$187,000	$162,000	$121,000	$117,000
Percent Income available for Expenditures	67%	68%	68%	67%
Spending Adjustment / Rental Vacancy	N/A	N/A	N/A	95%
Household Income Available for Expenditure[(1)]				
One Unit	$125,300	$110,200	$82,300	$74,000
100 Units [input to IMPLAN]	$12,530,000	$11,020,000	$8,230,000	$7,400,000

(1) Calculated as gross household income multiplied by the percent available for expenditures multiplied by the spending adjustment for rental vacancy. Result includes the share of income spent on housing as the required input to the IMPLAN model is income after taxes but before deduction of housing costs as described above.

The nexus analysis is conducted on 100-unit building modules for ease of presentation, and to avoid awkward fractions. The spending associated with 100 market rate residential units is the input into the IMPLAN model. Tables A-6 and A-7 summarize the conclusions of this section and calculate the household income for the 100-unit building modules.

TABLE A-1

1

SALES PRICE TO INCOME RATIO
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

			Prototype 1 Single Family Detached
Sales Price	$380 /SF	2,500 SF [1]	$950,000 [1]
Mortgage Payment			
Downpayment @ 20%		20% [2]	$190,000
Loan Amount			$760,000
Interest Rate			5.25% [3]
Term of Mortgage			30 years
Annual Mortgage Payment	$4,200 /month		$50,400
Other Costs			
Property Taxes	1.30%	of sales price [4]	$12,350
HOA Dues	$150	per month [1]	$1,800
Homeowner Insurance	0.10%	of sales price [5]	$1,000
Total Annual Housing Cost	$5,500 /month		$65,550
% of Income Spent on Hsg			35% [6]
Annual Household Income Required			**$187,000**
Sales Price to Income Ratio			5.1

Notes

(1) Based on KMA Market Survey.

(2) Reflects the median down payment for new purchase loans originated in zip codes corresponding to Alameda and Santa Clara Counties derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

(3) Average mortgage interest rate for prior 15 years derived from Freddie Mac Primary Mortgage Market Survey, West Region (rounded to nearest whole percentage). Based on weekly average rates for 30 year fixed rate mortgages during the period from 6/2002 through 6/2017. Includes a 0.25% premium to reflect the non-conforming nature of the loan (jumbo loan).

(4) Property tax rate is inclusive of ad valorem taxes and applicable voter approved rates, fixed charges, and assessments for the jurisdiction indicated. Source: ListSource.

(5) Estimated from quotes obtained from Progressive Insurance.

(6) Ratio is consistent with Fannie Mae mortgage underwriting eligibility criteria which establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria. Ratio is also consistent with the California Health and Safety Code standard for relating income to housing costs for ownership units. Freddie Mac data on new purchase loans originated in zip codes corresponding to Santa Clara and Alameda Counties for the 1st Quarter of 2015 indicates an average debt to income ratio of 37%; however, most households have other forms of debt such as credit cards, student loans, and auto loans that are included as part of this ratio and the ratio considering housing costs only would be lower.

TABLE A-2
PROTOTYPE 2: TOWNHOME
SALES PRICE TO INCOME RATIO
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

			Prototype 2 Townhome
Sales Price	$400 /SF	2,000 SF [1]	$800,000 [1]
Mortgage Payment			
Downpayment @ 20%		20% [2]	$160,000
Loan Amount			$640,000
Interest Rate			5.25% [3]
Term of Mortgage			30 years
Annual Mortgage Payment	$3,500 /month		$42,400
Other Costs			
Property Taxes	1.30%	of sales price [4]	$10,400
HOA Dues	$250	per month [1]	$3,000
Homeowner Insurance	0.10%	of sales price [5]	$800
Total Annual Housing Cost	$4,700 /month		$56,600
% of Income Spent on Hsg			35% [6]
Annual Household Income Required			**$162,000**
Sales Price to Income Ratio			4.9

Notes

(1) Based on KMA Market Survey.

(2) Reflects the median down payment for new purchase loans originated in zip codes corresponding to Alameda and Santa Clara Counties derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

(3) Average mortgage interest rate for prior 15 years derived from Freddie Mac Primary Mortgage Market Survey, West Region (rounded to nearest whole percentage). Based on weekly average rates for 30 year fixed rate mortgages during the period from 6/2002 through 6/2017. Includes a 0.25% premium to reflect the non-conforming nature of the loan (jumbo loan).

(4) Property tax rate is inclusive of ad valorem taxes and applicable voter approved rates, fixed charges, and assessments for the jurisdiction indicated. Source: ListSource.

(5) Estimated from quotes obtained from Progressive Insurance.

(6) Ratio is consistent with Fannie Mae mortgage underwriting eligibility criteria which establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria. Ratio is also consistent with the California Health and Safety Code standard for relating income to housing costs for ownership units. Freddie Mac data on new purchase loans originated in zip codes corresponding to Santa Clara and Alameda Counties for the 1st Quarter of 2015 indicates an average debt to income ratio of 37%; however, most households have other forms of debt such as credit cards, student loans, and auto loans that are included as part of this ratio and the ratio considering housing costs only would be lower.

TABLE A-3
PROTOTYPE 3: CONDOMINIUM
SALES PRICE TO INCOME RATIO
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

			Prototype 3 Condominium
Sales Price	$590 /SF	1,000 SF [1]	$590,000 [1]
Mortgage Payment			
Downpayment @ 20%		20% [2]	$118,000
Loan Amount			$472,000
Interest Rate			5.00% [3]
Term of Mortgage			30 years
Annual Mortgage Payment	$2,500 /month		$30,400
Other Costs			
Property Taxes	1.30%	of sales price [4]	$7,670
HOA Dues	$300	per month	$3,600
Homeowner Insurance	0.10%	sale price [5]	$600
Total Annual Housing Cost	$3,500 /month		$42,270
% of Income Spent on Hsg			35% [6]
Annual Household Income Required			**$121,000**
Sales Price to Income Ratio			4.9

Notes

(1) Based on KMA Market Survey.

(2) Reflects the median down payment for new purchase loans originated in zip codes corresponding to Alameda and Santa Clara Counties derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

(3) Average interest rate for prior 15 years derived from Freddie Mac Primary Mortgage Market Survey, West Region (rounded to nearest whole percentage). Based on weekly average rates for 30 year fixed rate mortgages during the period from 6/2002 through 6/2017.

(4) Property tax rate is inclusive of ad valorem taxes and applicable voter approved rates, fixed charges, and assessments for the jurisdiction indicated. Source: ListSource.

(5) Estimated from quotes obtained from Progressive Insurance.

(6) Ratio is consistent with Fannie Mae mortgage underwriting eligibility criteria which establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria. Ratio is also consistent with the California Health and Safety Code standard for relating income to housing costs for ownership units. Freddie Mac data on new purchase loans originated in zip codes corresponding to Santa Clara and Alameda Counties for the 1st Quarter of 2015 indicates an average debt to income ratio of 37%; however, most households have other forms of debt such as credit cards, student loans, and auto loans that are included as part of this ratio and the ratio considering housing costs only would be lower.

TABLE A-4
PROTOTYPE 4: APARTMENTS
RENT TO INCOME RATIO
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

		Prototype 4 Apartments
Market Rent	Unit Size	
Monthly	900 SF [1]	$2,800 [1]
Utilities[2]		$130
Monthly housing cost		$2,930
Annual housing cost		$35,160
% of Income Spent on Rent		30% [3]
Annual Household Income Required		**$117,000**
Annual Rent to Income Ratio		3.3

Notes

(1) Based on the results of the market survey. Represents rent levels applicable to new units.

(2) Monthly utilities include direct-billed utilities and landlord reimbursements estimated based on County Housing Authority utility allowance schedule.

(3) While landlords may permit rental payments to represent a slightly higher share of total income, 30% represents an average. This relationship is established in the California Health and Safety Code and used throughout housing policy to relate income to affordable rental housing costs.

TABLE A-5
INCOME AVAILABLE FOR EXPENDITURES[1]
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

	Prototype 1	*Prototype 2*	*Prototype 3*	*Prototype 4*
	Single Family Detached	**Townhome**	**Condominium**	**Apartments**
Gross Income	100%	100%	100%	100%
Less:				
Federal Income Taxes [2]	12.2%	12.2%	12.2%	14.0%
State Income Taxes [3]	4.7%	4.4%	3.7%	3.8%
FICA Tax Rate [4]	7.65%	7.65%	7.65%	7.65%
Savings & other deductions [5]	8%	8%	8%	8%
Percent of Income Available for Expenditures [6] [Input to IMPLAN model]	***67%***	***68%***	***68%***	***67%***

Notes:

[1] Gross income after deduction of taxes and savings. Income available for expenditures is the input to the IMPLAN model which is used to estimate the resulting employment impacts. Housing costs are not deducted as part of this adjustment step because they are addressed separately as expenditures within the IMPLAN model.

[2] Reflects average tax rates (as opposed to marginal) based on U.S. Internal Revenue Services, Tax Statistics, Tables 1.1 and 2.1 for 2014. Homeowners are assumed to itemize deductions. Renter households are assumed to take the standard deduction. Tax rates reflect averages for applicable income range.

[3] Average tax rate estimated by KMA based on marginal rates per the California Franchise Tax Board and ratios of taxable income to gross income estimated based on U.S. Internal Revenue Service data.

[4] For Social Security and Medicare. Social Security taxes estimated based upon the current ceiling on applicability of Social Security taxes of $127,200 (ceiling applies per earner not per household) and the average number of earners per household.

[5] Household savings including retirement accounts like 401k / IRA and other deductions such as interest costs on credit cards, auto loans, etc, necessary to determine the amount of income available for expenditures. The 8% rate used in the analysis is based on the average over the past 20 years computed from U.S. Bureau of Economic Analysis data, specifically the National Income and Product Accounts, Table 2.1 "Personal Income and Its Disposition."

[6] Deductions from gross income to arrive at the income available for expenditures are consistent with the way the IMPLAN model and National Income and Product Accounts (NIPA) defines income available for personal consumption expenditures. Income taxes, contributions to Social Security and Medicare, and savings are deducted; however, property taxes and sales taxes are not. Housing costs are not deducted as part of the adjustment because they are addressed separately as expenditures within the IMPLAN model.

TABLE A-6
FOR SALE PROTOTYPES: SALES PRICE TO INCOME SUMMARY
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

		Per Unit	Per Sq.Ft.	100 Unit Building Module (Per 100 Units)
PROTOTYPE 1 : SINGLE FAMILY DETACHED				
Building Sq.Ft. (excludes garage)		2,500		250,000
Sales Price		$950,000	$380	$95,000,000
Sales Price to Income Ratio		5.1		5.1
Gross Household Income		$187,000		$18,700,000
Income Available for Expenditure[1]	67% of gross	$125,300		**$12,530,000**
PROTOTYPE 2: TOWNHOME				
Building Sq.Ft. (excludes garage)		2,000		200,000
Sales Price		$800,000	$400	$80,000,000
Sales Price to Income Ratio		4.9		4.9
Gross Household Income		$162,000		$16,200,000
Income Available for Expenditure[1]	68% of gross	$110,200		**$11,020,000**
PROTOTYPE 3: CONDOMINIUM				
Building Sq.Ft. (excludes garage)		1,000		100,000
Sales Price		$590,000	$590	$59,000,000
Sales Price to Income Ratio		4.9		4.9
Gross Household Income		$121,000		$12,100,000
Income Available for Expenditure[1]	68% of gross	$82,300		**$8,230,000**

Notes:
(1) Represents net income available for expenditures after income tax, payroll taxes, and savings. See Table A-5 for derivation.

Source: See Table A-1 through A-3.

TABLE A-7
NEW MARKET RATE RESIDENTIAL HOUSEHOLD SUMMARY
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

		Per Unit	Per Sq.Ft.	100 Unit Building Module (Per 100 Units)
PROTOTYPE 4: APARTMENTS				
Building Sq.Ft.		900		90,000
Rent				
Monthly		$2,800	$3.11 /SF	$280,000
Monthly with Utilities		$2,930		
Annual with Utilities		$35,160		$3,516,000
Rent to Income Ratio		3.3		3.3
Gross Household Income		$117,000		$11,700,000
Income Available for Expenditure[1]	67% of gross	$78,000		$7,840,000
Expenditures adjusted for vacancy[2]	5% vacancy	$74,000		**$7,400,000**

Notes:

(1) Represents net income available for expenditures after income tax, payroll taxes, and savings. See Table A-5 for derivation.

(2) Allowance to account for standard operational vacancy.

Source: Table A-4

B. The IMPLAN Model

Consumer spending by residents of new housing units will create jobs, particularly in sectors such as restaurants, health care, and retail, which are closely connected to the expenditures of residents. The widely used economic analysis tool, IMPLAN (IMpact Analysis for PLANning), was used to quantify these new jobs by industry sector.

IMPLAN Model Description

The IMPLAN model is an economic analysis software package now commercially available through the IMPLAN Group, LLC. IMPLAN was originally developed by the U.S. Forest Service, the Federal Emergency Management Agency, and the U.S. Department of the Interior Bureau of Land Management and has been in use since 1979 and refined over time. It has become a widely used tool for analyzing economic impacts for a broad range of applications from major construction projects to natural resource programs.

IMPLAN is based on an input-output accounting of commodity flows within an economy from producers to intermediate and final consumers. The model establishes a matrix of supply chain relationships between industries and also between households and the producers of household goods and services. Assumptions about the portion of inputs or supplies for a given industry likely to be met by local suppliers, and the portion supplied from outside the region or study area are derived internally within the model using data on the industrial structure of the region.

The output or result of the model is generated by tracking changes in purchases for final use (final demand) as they filter through the supply chain. Industries that produce goods and services for final demand or consumption must purchase inputs from other producers, which in turn, purchase goods and services. The model tracks these relationships through the economy to the point where leakages from the region stop the cycle. This allows the user to identify how a change in demand for one industry will affect a list of over 500 other industry sectors. The projected response of an economy to a change in final demand can be viewed in terms of economic output, employment, or income.

Data sets are available for each county and state, so the model can be tailored to the specific economic conditions of the region being analyzed. This analysis utilizes the data set for Alameda County. As will be discussed, much of the employment impact is in local-serving sectors, such as retail, eating and drinking establishments, and medical services. A significant portion of these jobs will be located in Hayward or nearby. In addition, the employment impacts will extend throughout the county and beyond based on where jobs are located that serve Hayward residents. In fact, Hayward is part of the larger Bay Area economy and impacts will likewise extend throughout the region. However, consistent with the conservative approach taken in the nexus analysis, only the impacts that occur within Alameda County are included in the analysis.

Application of the IMPLAN Model to Estimate Job Growth

The IMPLAN model was applied to link income to household expenditures to job growth. Employment generated by the household income of residents is analyzed in modules of 100 residential units to simplify communication of the results and avoid awkward fractions. The IMPLAN model distributes spending among various types of goods and services (industry sectors) based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark input-output study, to estimate employment generated.

Job creation, driven by increased demand for products and services, was projected for each of the industries that will serve the new households. The employment generated by this new household spending is summarized below.

Jobs Generated Per 100 Units				
	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Annual Household Expenditures (100 Units)	$12,530,000	$11,020,000	$8,230,000	$7,400,000
Total Jobs Generated (100 Units)	93.0	81.8	58.2	52.3

Table B-1 provides a detailed summary of employment generated by industry. The table shows industries sorted by projected employment. The Consumer Expenditure Survey published by the Bureau of Labor Statistics tracks expenditure patterns by income level. IMPLAN utilizes this data to reflect the pattern by income bracket. Estimated employment is shown for each IMPLAN industry sector representing 1% or more of total employment. The jobs that are generated are heavily retail jobs, jobs in restaurants and other eating establishments, and in services that are provided locally such as health care. The jobs counted in the IMPLAN model cover all jobs, full and part time, similar to the U.S. Census and all reporting agencies (unless otherwise indicated).

TABLE B-1
IMPLAN MODEL OUTPUT
EMPLOYMENT GENERATED
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Per 100 Market Rate Units	*Prototype 1*	*Prototype 2*	*Prototype 3*	*Prototype 4*	
	Single Family Detached	**Townhome**	**Condominium**	**Apartments**	**% of Jobs**
Household Expenditures *(100 Market Rate Units)*	$12,530,000	$11,020,000	$8,230,000	$7,400,000	
Jobs Generated by Industry [1]					
Full-service restaurants	5.1	4.5	3.4	3.1	6%
Limited-service restaurants	4.2	3.7	2.8	2.5	5%
All other food and drinking places	2.7	2.4	1.8	1.6	3%
Subtotal Restaurant	12.0	10.6	8.0	7.2	13%
Retail - Food and beverage stores	2.9	2.6	1.8	1.6	3%
Retail - General merchandise stores	2.4	2.1	1.5	1.3	3%
Personal care services	1.7	1.5	1.2	1.1	2%
Retail - Health and personal care stores	1.0	0.9	0.6	0.6	1%
Retail - Miscellaneious store retailers	1.2	1.0	0.7	0.7	1%
Retail - Building material and garden	1.4	1.2	0.9	0.8	1%
Other personal services	1.3	1.2	0.8	0.7	1%
Retail - Clothing and accessories	0.9	0.8	0.6	0.5	1%
Retail - Motor vehicle and parts dealers	1.1	1.0	0.7	0.6	1%
Retail - Nonstore retailers	1.0	0.9	0.6	0.6	1%
Subtotal Retail and Service	15.0	13.2	9.4	8.4	16%
Hospitals	3.5	3.0	2.5	2.2	4%
Nursing and community care facilities	2.2	1.9	1.6	1.4	2%
Home health care services	1.2	1.1	0.9	0.8	1%
Offices of physicians	2.5	2.2	1.8	1.6	3%
Offices of dentists	1.2	1.0	0.9	0.8	1%
Offices of other health practitioners	1.2	1.0	0.9	0.8	1%
Subtotal Healthcare	11.7	10.3	8.5	7.6	13%
Other educational services	2.5	2.2	1.1	1.0	2%
Colleges, universities	1.1	1.0	0.5	0.4	1%
Elementary and secondary schools	1.6	1.4	0.7	0.6	1%
Subtotal Education	5.2	4.6	2.2	2.0	5%
Individual and family services	3.9	3.4	2.4	2.1	4%
Real estate	3.4	3.0	2.3	2.1	4%
Wholesale trade	3.0	2.6	1.9	1.7	3%
Services to private households	1.9	1.6	1.1	1.0	2%
Child day care services	1.8	1.6	0.8	0.7	2%
Other financial investment activities	1.7	1.5	1.0	0.9	2%
Automotive repair and maintenance	1.5	1.3	1.0	0.9	2%
Services to buildings	1.3	1.1	0.8	0.7	1%
Employment services	1.2	1.0	0.8	0.7	1%
Depository credit (banking)	1.0	0.9	0.6	0.5	1%
All Other	32.3	28.4	19.8	17.8	34%
Total Number of Jobs Generated	93.0	81.8	58.2	52.3	100%

[1] Estimated employment generated by expenditures of households within 100 prototypical market rate units for Industries representing more than 1% of total employment. Employment estimates are based on the IMPLAN Group's economic model, IMPLAN. Includes both full- and part-time jobs.

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C. The KMA Jobs Housing Nexus Model

This section presents a summary of the analysis linking the employment growth associated with residential development, or the output of the IMPLAN model (see Section B), to the estimated number of lower income housing units required in each of four income categories, for each of the four residential prototype units.

Analysis Approach and Framework

The analysis approach is to examine the employment growth for industries related to consumer spending by residents in the 100-unit modules. Then, through a series of linkage steps, the number of employees is converted to households and housing units by affordability level. The findings are expressed in terms of numbers of affordable units per 100 market rate units. The analysis addresses the affordable unit demand associated with single family detached, townhomes, condos, and rental units.

The table below shows the 2017 Area Median Income (AMI) for Alameda County, as well as the income limits for the four categories that were evaluated: Extremely Low (30% of AMI), Very Low (50% of AMI), Low (80% of AMI), and Moderate (120% of AMI). The income definitions used in the analysis are those published by the California Department of Housing and Community Development (HCD).

2017 Income Limits for Alameda County						
	Household Size (Persons)					
	1	2	3	4	5	6 +
Extr. Low (Under 30% AMI)	$21,950	$25,050	$28,200	$31,300	$33,850	$36,350
Very Low (30%-50% AMI)	$36,550	$41,750	$46,950	$52,150	$56,350	$60,500
Low (50%-80% AMI)	$56,300	$64,350	$72,400	$80,400	$86,850	$93,300
Moderate (80%-120% AMI)	$81,850	$93,500	$105,200	$116,900	$126,250	$135,600
Median (100% of Median)	$68,200	$77,900	$87,650	$97,400	$105,200	$113,000

Source: California Department of Housing and Community Development.

The analysis is conducted using a model that KMA developed and has applied to similar evaluations in many other jurisdictions. The model inputs are all local data to the extent possible, and are fully documented in the following description.

Analysis Steps

The tables at the end of this section present a summary of the nexus analysis steps for the prototype units. Following is a description of each step of the analysis.

Step 1 – Estimate of Total New Employees

Table C-1 commences with the total number of employees associated with the new market rate units. The employees were estimated based on household expenditures of new residents using the IMPLAN model (see Section B).

Step 2 – Changing Industries Adjustment and Net New Jobs

The local economy, like that of the U.S. as a whole, is constantly evolving, with job losses in some sectors and job growth in others. Over the past decade, employment in manufacturing sectors of the local economy have declined along with governmental employment, farming, construction and financial activities employment. Jobs lost over the last decade in these declining sectors were replaced by job growth in other industry sectors.

Step 2 makes an adjustment to take ongoing changes in the economy into account recognizing that jobs added are not 100% net new in all cases. A 20% adjustment is utilized based on the long term shifts in employment that have occurred in some sectors of the local economy and the likelihood of continuing changes in the future. Long term declines in employment experienced in some sectors of the economy mean that some of the new jobs are being filled by workers that have been displaced from another industry and who are presumed to already have housing locally. Existing workers downsized from declining industries are assumed to be available to fill a portion of the new retail, restaurant, health care, and other jobs associated with services to residents.

The 20% downward adjustment used for purposes of the analysis was derived from California Employment Development Department data on employment by industry in the Oakland-Hayward-Berkeley and San Jose-Sunnyvale-Santa Clara Metropolitan Districts over the ten-year period from 2005 to 2015 and reflects the ratio between jobs lost in declining industries to jobs gained in growing and stable industries at 20%[8]. The 20% factor is applied as an adjustment in the analysis, effectively assuming one in every five new jobs is filled by a worker down-sized from a declining industry and who already lives locally.

The discount for changing industries is a conservative analysis assumption that may result in an understatement of impacts. The adjustment assumes workers down-sized from declining sectors of the local economy are available to fill a portion of the new service sector jobs documented in a residential nexus analysis. In reality, displaced workers from declining industry sectors of the economy are not always available to fill these new service jobs because they may retire or exit the workforce or may be competitive for and seek employment in one of the other growing sectors of the local economy that is not oriented towards services to local residents.

[8] The 20% ratio is calculated as 55,000 jobs lost in declining sectors excluding defense divided by 268,000 jobs gained in growing and stable sectors = 20.5% (rounded to 20%).

Step 3 – Adjustment from Employees to Employee Households

This step (Table C-1) converts the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced. The workers-per-worker-household ratio eliminates from the equation all non-working households, such as retired persons, students, and those on public assistance. The County average of 1.62 workers per worker household (from the U. S. Census Bureau 2011-2015 American Community Survey) is used for this step in the analysis. The number of jobs is divided by 1.62 to determine the number of worker households. This ratio is distinguished from the overall number of workers per household in that the denominator includes only households with at least one worker. If the average number of workers in all households were used, it would have produced a greater demand for housing units. The 1.62 ratio covers all workers, full and part time.

Step 4 – Occupational Distribution of Employees

The occupational breakdown of employees is the first step to arrive at income level. The output from the IMPLAN model provides the number of employees by industry sector, shown in Table B-1. The IMPLAN output is paired with data from the Department of Labor, Bureau of Labor Statistics May 2016 Occupational Employment Survey (OES) to estimate the occupational composition of employees for each industry sector.

Step 4a – Translation from IMPLAN Industry Codes to NAICS Industry Codes

The output of the IMPLAN model is jobs by industry sector using IMPLAN's own industry classification system, which consists of 536 industry sectors. The OES occupation data uses the North American Industry Classification System (NAICS). Estimates of jobs by IMPLAN sector must be translated into estimates by NAICS code for consistency with the OES data.

The NAICS system is organized into industry codes ranging from two- to six-digits. Two-digit codes are the broadest industry categories and six-digit codes are the most specific. Within a two-digit NAICS code, there may be several three-digit codes and within each three-digit code, several four-digit codes, etc. A chart published by IMPLAN relates each IMPLAN industry sector with one or more NAICS codes, with matching NAICS codes ranging from the two-digit level to the five-digit level. For purposes of the nexus analysis, all employment estimates must be aggregated to the four, or in some cases, five-digit NAICS code level to align with OES data which is organized by four and five-digit NAICS code. For some industry sectors, an allocation is necessary between more than one NAICS code. Where required, allocations are made proportionate to total employment at the national level from the OES.

The table below illustrates analysis Step 4a in which employment estimates by IMPLAN Code are translated to NAICS codes and then aggregated at the four and five digit NAICS code level.

The examples used are Child Day Care Centers and Hospitals. The process is applied to all the industry sectors.

Illustration of Model Step 4a.						
A. IMPLAN Output by IMPLAN Industry Sector		B. Link to Corresponding NAICS		C. Aggregate at 4-Digit NAICS Code Level		
Jobs	IMPLAN Sector	Jobs	NAICS Code	Jobs	% Total	4-Digit NAICS
1.6	487 - Child day care services	1.6	6244 Child day care services	1.6	100%	6244 Child day care services
3.0	482 - Hospitals	3.0	622 Hospitals	2.8	92%	6221 General Medical and Surgical Hospitals
				0.1	4%	6222 Psychiatric and Substance Abuse Hospitals
				0.1	4%	6223 Specialty (except Psychiatric and Substance Abuse) Hospitals

Source: KMA, Bureau of Labor Statistics May 2016 Occupational Employment Survey.

Step 4b – Apply OES Data to Estimate Occupational Distribution

Employment estimates by four and five-digit NAICS code from step 4a are paired with data on occupational composition within each industry from the OES to generate an estimate of employment by detailed occupational category. As shown on Table C-1, new jobs will be distributed across a variety of occupational categories. The three largest occupational categories are office and administrative support (16%), food preparation and serving (14%), and sales and related (13%). Step 4 of Table C-1 indicates the percentage and number of employee households by occupation associated with 100 market rate units.

Step 5 – Estimates of Employee Households Meeting the Lower Income Definitions

In this step, occupations are translated to employee incomes based on recent Alameda County wage and salary information from the California Employment Development Department (EDD). The wage and salary information summarized in Appendix B provided the income inputs to the model.

For each occupational category shown in Table C-1, the OES data provides a distribution of specific occupations within the category. For example, within the Food Preparation and Serving Category, there are Supervisors, Cooks, Bartenders, Waiters and Waitresses, Dishwashers, etc. In total there are over 100 detailed occupation categories included in the analysis as shown in the Appendix B tables. Each of these over 100 occupation categories has a different

distribution of wages which was obtained from EDD and is specific to workers in Alameda County as of 2017.

For each detailed occupational category, the model uses the distribution of wages to calculate the percent of worker households that would fall into each income category. The calculation is performed for each possible combination of household size and number of workers in the household. For households with more than one worker, individual *employee* income data was used to calculate the household income by assuming multiple earner households are, on average, formed of individuals with similar incomes.

At the end of Step 5, the nexus model has established a matrix indicating the percentages of households that would qualify in the affordable income tiers for every detailed occupational category and every potential combination of household size and number of workers in the household.

Step 6 – Distribution of Household Size and Number of Workers

In this step, we account for the distribution in household sizes and number of workers for Alameda County households using local data obtained from the U.S. Census. Census data is used to develop a set of percentage factors representing the distribution of household sizes and number of workers within working households. The percentage factors are specific to Alameda County and are derived from the 2011 – 2015 American Community Survey. Application of these percentage factors accounts for the following:

- Households have a range in size and a range in the number of workers.
- Large households generally have more workers than smaller households.

The result of Step 6 is a distribution of Alameda County working households by number of workers and household size.

Step 7 – Estimate of Number of Households that Meet Size and Income Criteria

Step 7 is the final step to calculate the number of worker households meeting the size and income criteria for the four affordability tiers. The calculation combines the matrix of results from Step 5 on percentage of worker households that would meet the income criteria at each potential household size / number of workers combination, with Step 6, the percentage of worker household having a given household size / number of workers combination. The result is the percent of households that fall into each affordability tier. The percentages are then multiplied by the number of households from Step 3 to arrive at number of households in each affordability tier.

Table C-2A shows the result after completing Steps 5, 6, and 7 for the Extremely Low Income Tier. Tables C-2B, C-2C, C-2D show results for the Very Low, Low, and Moderate Income tiers.

Summary Findings

Table C-3 indicates the results of the analysis for all the affordability tiers. The table presents the number of households generated in each affordability category and the total number over 120% of Area Median Income.

The findings in Table C-3 are presented below. The table shows the total demand for affordable housing units associated with 100 market rate units.

New Worker Households per 100 Market Rate Units				
	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Extremely Low (0%-30% AMI)	5.1	4.5	3.2	2.9
Very Low (30%-50% AMI)	11.8	10.4	7.4	6.6
Low (50%-80% AMI)	12.2	10.8	7.6	6.8
Moderate (80%-120% AMI)	7.4	6.5	4.6	4.1
Total, Less than 120% AMI	**36.6**	**32.2**	**22.8**	**20.5**
Greater than 120% AMI	9.3	8.2	5.9	5.3
Total, New Households	**45.9**	**40.3**	**28.7**	**25.8**

Housing demand for new worker households earning less than 120% of AMI ranges from 36.6 units per 100 market rate units for single family detached units to 20.5 per 100 market rate units for the apartments. Housing demand is distributed across the lower income tiers with the greatest numbers of households in the Very Low and Low tiers. The finding that the jobs associated with consumer spending tend to be low-paying jobs where the workers will require housing affordable at the lower income levels is not surprising. As noted above, direct consumer spending results in employment that is concentrated in lower paid occupations including food preparation, administrative, and retail sales.

TABLE C-1
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

	Prototype 1 **Single Family Detached**	*Prototype 2* **Townhome**	*Prototype 3* **Condominium**	*Prototype 4* **Apartments**
Step 1 - Employees [1]	93.0	81.8	58.2	52.3
Step 2 - Adjustment for Changing Industries (20%) (2)	74.4	65.4	46.5	41.9
Step 3 - Adjustment for Number of Households (1.62) (3)	45.9	40.3	28.7	25.8
Step 4 - Occupation Distribution [4]				
Management Occupations	4.5%	4.5%	4.4%	4.4%
Business and Financial Operations	4.5%	4.5%	4.4%	4.4%
Computer and Mathematical	1.5%	1.5%	1.5%	1.5%
Architecture and Engineering	0.5%	0.5%	0.5%	0.5%
Life, Physical, and Social Science	0.3%	0.3%	0.3%	0.3%
Community and Social Services	2.0%	2.0%	2.0%	2.0%
Legal	0.6%	0.6%	0.6%	0.6%
Education, Training, and Library	4.4%	4.4%	3.2%	3.2%
Arts, Design, Entertainment, Sports, and Media	1.9%	1.9%	1.7%	1.7%
Healthcare Practitioners and Technical	6.9%	6.9%	7.7%	7.7%
Healthcare Support	4.2%	4.2%	4.7%	4.7%
Protective Service	1.4%	1.4%	1.3%	1.3%
Food Preparation and Serving Related	13.6%	13.6%	14.4%	14.4%
Building and Grounds Cleaning and Maint.	5.2%	5.2%	5.1%	5.1%
Personal Care and Service	7.0%	7.0%	6.9%	6.9%
Sales and Related	12.6%	12.6%	12.6%	12.6%
Office and Administrative Support	15.7%	15.7%	15.7%	15.7%
Farming, Fishing, and Forestry	0.1%	0.1%	0.1%	0.1%
Construction and Extraction	1.1%	1.1%	1.1%	1.1%
Installation, Maintenance, and Repair	3.8%	3.8%	3.9%	3.9%
Production	1.7%	1.7%	1.7%	1.7%
Transportation and Material Moving	6.3%	6.3%	6.1%	6.1%
Totals	100.0%	100.0%	100.0%	100.0%
Management Occupations	2.0	1.8	1.3	1.1
Business and Financial Operations	2.1	1.8	1.3	1.1
Computer and Mathematical	0.7	0.6	0.4	0.4
Architecture and Engineering	0.2	0.2	0.1	0.1
Life, Physical, and Social Science	0.1	0.1	0.1	0.1
Community and Social Services	0.9	0.8	0.6	0.5
Legal	0.3	0.3	0.2	0.2
Education, Training, and Library	2.0	1.8	0.9	0.8
Arts, Design, Entertainment, Sports, and Media	0.9	0.8	0.5	0.4
Healthcare Practitioners and Technical	3.2	2.8	2.2	2.0
Healthcare Support	1.9	1.7	1.3	1.2
Protective Service	0.6	0.6	0.4	0.3
Food Preparation and Serving Related	6.2	5.5	4.1	3.7
Building and Grounds Cleaning and Maint.	2.4	2.1	1.5	1.3
Personal Care and Service	3.2	2.8	2.0	1.8
Sales and Related	5.8	5.1	3.6	3.2
Office and Administrative Support	7.2	6.3	4.5	4.1
Farming, Fishing, and Forestry	0.0	0.0	0.0	0.0
Construction and Extraction	0.5	0.5	0.3	0.3
Installation, Maintenance, and Repair	1.7	1.5	1.1	1.0
Production	0.8	0.7	0.5	0.4
Transportation and Material Moving	2.9	2.6	1.8	1.6
Totals	45.9	40.3	28.7	25.8

Notes:

[1] Estimated employment generated by expenditures of households within 100 prototypical market rate units from Table B-1.

[2] The 20% adjustment is based upon job losses in declining sectors of the local economy over the past 10 years. “Downsized” workers from declining sectors are assumed to fill a portion of new jobs in sectors serving residents. 20% adjustment calculated as 54,700 jobs lost in declining sectors divided by 267,700 jobs gained in growing and stable sectors = 20%.

[3] Adjustment from number of workers to households using county-wide average of 1.62 workers per worker household derived from the U.S. Census American Community Survey 2011 to 2015.

[4] See Appendix B Tables 1 - 4 for additional information on Major Occupation Categories.

TABLE C-2A

EXTREMELY LOW-INCOME (ELI) EMPLOYEE HOUSEHOLDS[1] GENERATED
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Per 100 Market Rate Units

	Prototype 1	*Prototype 2*	*Prototype 3*	*Prototype 4*
	Single Family Detached	**Townhome**	**Condominium**	**Apartments**
Step 5 & 6 - Extremely Low Income Households (under 30% AMI) within Major Occupation Categories [2]				
Management	0.00	0.00	0.00	0.00
Business and Financial Operations	-	-	-	-
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	-	-	-	-
Legal	-	-	-	-
Education Training and Library	0.11	0.10	0.05	0.05
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.00	0.00	0.00	0.00
Healthcare Support	0.17	0.15	0.11	0.10
Protective Service	-	-	-	-
Food Preparation and Serving Related	1.44	1.27	0.96	0.86
Building Grounds and Maintenance	0.26	0.22	0.16	0.14
Personal Care and Service	0.62	0.54	0.38	0.34
Sales and Related	1.08	0.95	0.67	0.60
Office and Admin	0.37	0.33	0.23	0.21
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.03	0.02	0.02	0.02
Production	-	-	-	-
Transportation and Material Moving	0.31	0.27	0.19	0.17
ELI Households - Major Occupations	4.38	3.86	2.78	2.50
ELI Households[1] - all other occupations	0.70	0.62	0.43	0.39
Total ELI Households[1]	**5.09**	**4.47**	**3.21**	**2.88**

(1) Includes households earning from zero through 30% of Alameda County Area Median Income.

(2) See Appendix B Tables 1 - 4 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2 and 4. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.

TABLE C-2B

VERY LOW-INCOME EMPLOYEE HOUSEHOLDS[1] GENERATED
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Per 100 Market Rate Units

	Prototype 1	*Prototype 2*	*Prototype 3*	*Prototype 4*
	Single Family Detached	**Townhome**	**Condominium**	**Apartments**
Step 5 & 6 - Very Low Income Households (30%-50% AMI) within Major Occupation Categories [2]				
Management	0.03	0.03	0.02	0.02
Business and Financial Operations	0.02	0.01	0.01	0.01
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	-	-	-	-
Legal	-	-	-	-
Education Training and Library	0.48	0.43	0.22	0.20
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.05	0.05	0.04	0.03
Healthcare Support	0.63	0.55	0.44	0.39
Protective Service	-	-	-	-
Food Preparation and Serving Related	2.19	1.93	1.45	1.31
Building Grounds and Maintenance	0.80	0.70	0.49	0.44
Personal Care and Service	1.14	1.01	0.70	0.63
Sales and Related	1.88	1.66	1.17	1.06
Office and Admin	1.80	1.58	1.13	1.02
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.29	0.25	0.18	0.16
Production	-	-	-	-
Transportation and Material Moving	0.88	0.78	0.54	0.48
Very Low Households - Major Occupations	10.20	8.97	6.38	5.74
Very Low Households[1] - all other occupations	1.63	1.44	0.99	0.89
Total Very Low Inc. Households[1]	**11.83**	**10.41**	**7.37**	**6.63**

(1) Includes households earning from 30% through 50% of Alameda County Area Median Income.

(2) See Appendix B Tables 1 - 4 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2 and 4. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.

TABLE C-2C

LOW-INCOME EMPLOYEE HOUSEHOLDS[1] GENERATED
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Per 100 Market Rate Units

	Prototype 1	*Prototype 2*	*Prototype 3*	*Prototype 4*
	Single Family Detached	**Townhome**	**Condominium**	**Apartments**
Step 5 & 6 - Low Income Households (50%-80% AMI) within Major Occupation Categories [2]				
Management	0.11	0.10	0.07	0.07
Business and Financial Operations	0.22	0.20	0.14	0.12
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	-	-	-	-
Legal	-	-	-	-
Education Training and Library	0.58	0.51	0.26	0.24
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.17	0.15	0.11	0.10
Healthcare Support	0.59	0.52	0.41	0.37
Protective Service	-	-	-	-
Food Preparation and Serving Related	1.79	1.57	1.18	1.06
Building Grounds and Maintenance	0.75	0.66	0.46	0.41
Personal Care and Service	0.97	0.85	0.59	0.53
Sales and Related	1.65	1.45	1.03	0.93
Office and Admin	2.31	2.03	1.45	1.30
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.47	0.42	0.30	0.27
Production	-	-	-	-
Transportation and Material Moving	0.92	0.81	0.56	0.50
Low Households - Major Occupations	10.54	9.27	6.58	5.91
Low Households[1] - all other occupations	1.69	1.48	1.02	0.92
Total Low Inc. Households[1]	**12.23**	**10.76**	**7.60**	**6.83**

(1) Includes households earning from 50% through 80% of Alameda County Area Median Income.

(2) See Appendix B Tables 1 - 4 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2 and 4. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.

TABLE C-2D

MODERATE-INCOME EMPLOYEE HOUSEHOLDS[1] GENERATED
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Per 100 Market Rate Units

	Prototype 1	*Prototype 2*	*Prototype 3*	*Prototype 4*
	Single Family Detached	**Townhome**	**Condominium**	**Apartments**
Step 5 & 6 - Moderate Income Households (80%-120% AMI) within Major Occupation Categories [2]				
Management	0.28	0.25	0.18	0.16
Business and Financial Operations	0.41	0.36	0.25	0.23
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	-	-	-	-
Legal	-	-	-	-
Education Training and Library	0.46	0.40	0.21	0.19
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.46	0.40	0.31	0.28
Healthcare Support	0.36	0.32	0.25	0.23
Protective Service	-	-	-	-
Food Preparation and Serving Related	0.52	0.46	0.34	0.31
Building Grounds and Maintenance	0.43	0.38	0.26	0.24
Personal Care and Service	0.31	0.28	0.19	0.17
Sales and Related	0.68	0.60	0.42	0.38
Office and Admin	1.54	1.35	0.96	0.87
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.45	0.39	0.29	0.26
Production	-	-	-	-
Transportation and Material Moving	0.50	0.44	0.30	0.27
Moderate Households - Major Occupations	6.40	5.62	3.97	3.57
Modereate Households[1] - all other occupations	1.02	0.90	0.62	0.55
Total Moderate Inc. Households[1]	**7.42**	**6.53**	**4.59**	**4.12**

(1) Includes households earning from 80% through 120% of Alameda County Area Median Income.

(2) See Appendix B Tables 1 - 4 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2 and 4. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.

TABLE C-3
IMPACT ANALYSIS SUMMARY
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

RESIDENTIAL UNIT DEMAND IMPACTS - PER 100 MARKET RATE UNITS

	Prototype 1	*Prototype 2*	*Prototype 3*	*Prototype 4*
Number of New Households[1]	**Single Family Detached**	**Townhome**	**Condominium**	**Apartments**
Under 30% AMI	5.1	4.5	3.2	2.9
30% to 50% AMI	11.8	10.4	7.4	6.6
50% to 80% AMI	12.2	10.8	7.6	6.8
80% to 120% AMI	7.4	6.5	4.6	4.1
Subtotal through 120% AMI	36.6	32.2	22.8	20.5
Over 120% AMI	9.3	8.2	5.9	5.3
Total Employee Households	45.9	40.3	28.7	25.8

RESIDENTIAL UNIT DEMAND IMPACTS - PER EACH (1) MARKET RATE UNIT

	Prototype 1	*Prototype 2*	*Prototype 3*	*Prototype 4*
Number of New Households[1]	**Single Family Detached**	**Townhome**	**Condominium**	**Apartments**
Under 30% AMI	0.05	0.04	0.03	0.03
30% to 50% AMI	0.12	0.10	0.07	0.07
50% to 80% AMI	0.12	0.11	0.08	0.07
80% to 120% AMI	0.07	0.07	0.05	0.04
Subtotal through 120% AMI	0.37	0.32	0.23	0.20
Over 120% AMI	0.09	0.08	0.06	0.05
Total Employee Households	0.46	0.40	0.29	0.26

Notes

[1] Households of retail, education, healthcare and other workers that serve residents of new market rate units.

AMI = Area Median Income

D. Mitigation Costs

This section takes the conclusions of the previous section on the number of households in the lower income categories associated with the market rate units and identifies the total cost of assistance required to make housing affordable. This section puts a cost on the units for each income level to produce the "total nexus cost." This is done for each of the prototype units.

A key component of the analysis is the size of the gap between what households can afford and the cost of producing new housing in Hayward, known as the 'affordability gap.' Affordability gaps are calculated for each of the four categories of Area Median Income: Extremely Low (under 30% of median), Very Low (30% to 50%), Low (50% to 80%), and Moderate (80% to 120%). The following summarizes the analysis of mitigation cost which is based on the affordability gap or net cost to deliver units that are affordable to worker households in the lower income tiers.

City Assisted Affordable Unit Prototypes

For estimating the affordability gap, there is a need to match a household of each income level with a unit type and size according to governmental regulations and City practices and policies. The analysis assumes that the City will assist Moderate Income households earning between 80% and 120% of Area Median Income with ownership units. The prototype affordable unit should reflect a modest unit consistent with what the City is likely to assist and appropriate for housing the average Moderate Income worker household. The typical project assumed for Hayward is a three-bedroom attached townhome unit for a four-person household.

For Low-, Very Low-, and Extremely Low-Income households, it is assumed that the City will assist in the development of multi-family rental units. The analysis uses a two-bedroom affordable rental unit for a three-person household.

Development Costs

KMA prepared an estimate of the total development cost for the two affordable housing prototypes described above (inclusive of land acquisition costs, direct construction costs, indirect costs of development, and financing) based on a review of development pro formas for recent affordable projects, recent residential land sale comps, and other construction data sources such as RS Means. It is estimated that the new affordable for-sale townhome unit would have a total development cost of approximately $564,000 and the new affordable multi-family apartment unit would have a total development cost of approximately $502,000. Development cost assumptions were designed to be reflective of averages for affordable projects in Hayward. Tables D-1 and D-3 provide further details.

Development Costs for Affordable Units		
Income Group	*Unit Tenure / Type*	*Development Cost*
Under 30% AMI	Rental	$502,000
30% to 50% AMI	Rental	$502,000
50% to 80% AMI	Rental	$502,000
80% to 120% AMI	Ownership	$564,000

The multi-family construction costs reflect the costs of building at higher densities, including structured parking garages as well as the inclusion of common building areas such as internal hallways, lobbies, community rooms, and a manager's office, which townhome developments typically do not have. Prevailing wages are assumed in the construction of both affordable housing prototypes, as it is assumed that public funds will be used to subsidize the projects.

Development cost estimates were informed by KMA's review of pro forma information for three recent affordable projects in Hayward as well as numerous other local multi-family affordable housing projects. Direct construction costs from these projects were adjusted to account for such factors as time, unit size, housing type, and project density to appropriately reflect the multi-family prototype assumed in the analysis. Other costs, such as land acquisition costs, are more site and area specific than direct construction costs and therefore the inputs for those costs were derived from other sources.

Unit Values

For affordable ownership units, the unit value was based on an estimate of the restricted affordable purchase price for a qualifying Moderate Income household. For a 3-bedroom unit, KMA calculated the affordable sales price for the matching 4-person household at $391,600. Details of the calculation are presented in Table D-3.

For the Extremely Low, Very Low, and Low-Income rental units, unit values are based upon the funding sources assumed to be available for the project. The funding sources include permanent debt financing supported by the project's operating income, a deferred developer fee, and equity generated by the sale of Low Income Housing Tax Credits (LIHTC), a common source of financing for affordable apartment projects. Affordable housing subsidies from other sources such as CDBG, HOME, AHP, Section 8, and various Federal and State funding programs are limited and difficult to obtain and therefore are not assumed in this analysis as available to offset the cost of mitigating the affordable housing impacts of new development.

On this basis, KMA estimated the unit value (total permanent funding sources) of the Extremely Low-Income rental units at $223,800, the Very Low-Income units at $295,800, and the Low-income units at $331,800. Details for these calculations are presented in Table D-1.

Unit Values for Affordable Units			
Income Group	*Unit Tenure / Type*	*Household Size*	*Unit Values / Affordable Sales Price*
Under 30% AMI	Rental	3 persons	$223,800
30% to 50% AMI	Rental	3 persons	$295,800
50% to 80% AMI	Rental	3 persons	$331,800
80% to 120% AMI	Ownership	4 persons	$391,600

Affordability Gap

The affordability gap is the difference between the cost of developing the affordable units and the unit value based on the restricted affordable rent or sales price.

The resulting affordability gaps are as follows:

Affordability Gap Calculation			
	Unit Value / Affordable Sales Price	*Development Cost*	*Affordability Gap*
Affordable Rental Units			
Extremely Low (Under 30% AMI)	$223,800	$502,000	$278,200
Very Low (30% to 50% AMI)	$295,800	$502,000	$206,200
Low (50% to 80% AMI)	$331,800	$502,000	$170,200
Affordable Ownership Units			
Moderate (80% to 120% AMI)	$391,600	$564,000	$172,400

AMI = Area Median Income

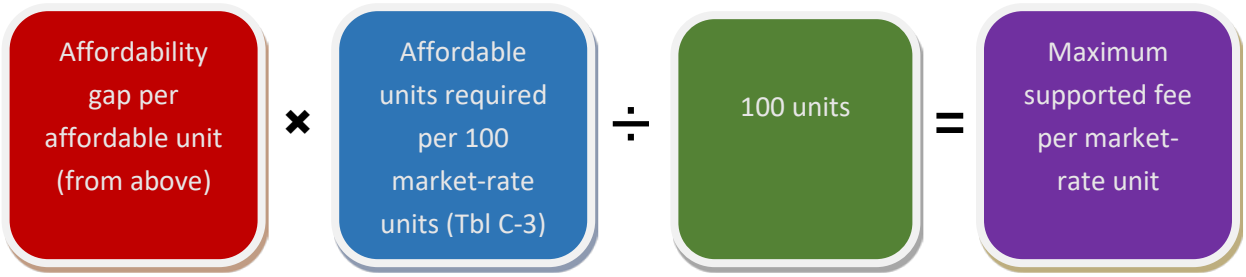
Tables D-1 through D-3 present the detailed affordability gap calculations.

Total Nexus Cost / Maximum Fee Levels

The last step in the linkage fee analysis marries the findings on the numbers of households in each of the lower income ranges associated with the four prototypes to the affordability gaps, or the costs of delivering housing to them in Hayward.

Table D-4 summarizes the analysis. The Affordability Gaps are drawn from the prior discussion. The "Total Nexus Cost per Market Rate Unit" shows the results of the following calculation:

Calculation of Maximum Supported Fee Per Market-Rate Unit



The total nexus costs or maximum supported fee per market rate unit for each of the prototypes are as follows:

Total Nexus Cost Per Market Rate Unit, City of Hayward				
Income Category	*Single Family Detached*	*Townhome*	*Condominium*	*Apartments*
Extremely Low (0%-30% AMI)	$14,200	$12,400	$8,900	$8,000
Very Low (30%-50% AMI)	$24,400	$21,500	$15,200	$13,700
Low (50%-80% AMI)	$20,800	$18,300	$12,900	$11,600
Moderate (80%-120% AMI)	$12,800	$11,200	$7,900	$7,100
Total Supported Fee/ Nexus Costs	**$72,200**	**$63,400**	**$44,900**	**$40,400**

The Total Nexus Costs, or Mitigation Costs, indicated above, may also be expressed on a per square foot level. The square foot area of the prototype unit used throughout the analysis becomes the basis for the calculation (the per unit findings from above are divided by unit size to get the per square foot findings). The results per square foot of building area (based on net rentable or sellable square feet excluding parking areas, external corridors and other common areas) are as follows:

Total Nexus Cost Per Sq. Ft., City of Hayward				
	Single Family Detached	*Townhome*	*Condominium*	*Apartments*
Unit Size (Sq Ft)	*2,500 SF*	*2,000 SF*	*1,000 SF*	*900 SF*
Extremely Low (0%-30% AMI)	$5.70	$6.20	$8.90	$8.90
Very Low (30%-50% AMI)	$9.80	$10.80	$15.20	$15.20
Low (50%-80% AMI)	$8.30	$9.20	$12.90	$12.90
Moderate (80%-120% AMI)	$5.10	$5.60	$7.90	$7.90
Total Nexus Costs	**$28.90**	**$31.80**	**$44.90**	**$44.90**

These costs express the total linkage or nexus costs for the four prototype developments in the City of Hayward. These total nexus costs represent the ceiling for any requirement placed on market rate development. **The totals are not recommended levels for fees; they represent only the maximums established by the analysis, below which fees may be set.**

TABLE D-1
AFFORDABILITY GAPS FOR EXTREMELY LOW, VERY LOW, AND LOW INCOME
CITY OF HAYWARD

		Extremely Low	Very Low	Low Income
I. Affordable Prototype				
Tenure		Rental		
Average Unit Size		800 square feet		
II. Development Costs [1]		Per Unit	Per Unit	Per Unit
Land Acquisition		$40,000	$40,000	$40,000
Directs		$328,000	$328,000	$328,000
Indirects		$115,000	$115,000	$115,000
Financing		$19,000	$19,000	$19,000
Total Development Costs		$502,000	$502,000	$502,000
III. Supported Financing		Per Unit	Per Unit	Per Unit
Affordable Rents				
Average Number of Bedrooms		2 Bedrooms	2 Bedrooms	2 Bedrooms
Maximum TCAC Rent [2]		$704	$1,173	$1,408
(Less) Utility Allowance [3]		($92)	($92)	($92)
Maximum Monthly Rent		$612	$1,081	$1,316
Net Operating Income (NOI)				
Gross Potential Income				
Monthly		$612	$1,081	$1,316
Annual		$7,344	$12,972	$15,792
Other Income		$250	$250	$250
(Less) Vacancy	5.0%	($380)	($661)	($802)
Effective Gross Income (EGI)		$7,214	$12,561	$15,240
(Less) Operating Expenses		($6,000)	($6,000)	($6,000)
(Less) Property Taxes [4]		$0	$0	$0
Net Operating Income (NOI)		$1,214	$6,561	$9,240
Permanent Financing				
Permanent Loan	5.0%	$16,000	$88,000	$124,000
Deferred Developer Fee		$7,000	$7,000	$7,000
4% Tax Credit Equity		$200,800	$200,800	$200,800
Total Sources		$223,800	$295,800	$331,800
IV. Affordability Gap		Per Unit	Per Unit	Per Unit
Supported Permanent Financing		$223,800	$295,800	$331,800
(Less) Total Development Costs		($502,000)	($502,000)	($502,000)
Affordability Gap		($278,200)	($206,200)	($170,200)

[1] Development costs estimated by KMA based on affordable project pro formas in Alameda County (includes prevailing wages) and residential land sale comps.

[2] Maximum rents per Tax Credit Allocation Committee (TCAC) for projects utilizing Low Income Housing Tax Credits.

[3] Utility allowances from Alameda County Housing Authority (2017).

[4] Assumes tax exemption for non-profit general partner.

TABLE D-2
AFFORDABILITY GAP FOR MODERATE INCOME
CITY OF HAYWARD

I. Affordable Prototype	
Tenure	For-Sale
Density	20 du/acre
Unit Size	1,600 SF
Bedrooms	3-Bedrooms
Construction Type	Townhomes

II. Development Costs	Per Unit
Land Acquisition	$70,000
Directs	$368,000 [1]
Indirects	$110,000
Financing	$16,000
Total Costs	$564,000

III. Affordable Sales Price	Per Unit
Household Size	4 person HH
110% of Median Income [2]	$107,140
Maximum Affordable Sales Price	$391,600 [3]

IV. Affordability Gap	Per Unit
Affordable Sales Price	$391,600
(Less) Development Costs	($564,000)
Affordability Gap - Moderate Income	($172,400)

[1] Construction costs include prevailing wages.

[2] Per California Health and Safety Code Section 50052.5, the affordable sale price for a Moderate Income household is to be based on 110% of AMI, whereas qualifying income can be up to 120% of AMI.

[3] See Table D-3 for Moderate Income home price estimate.

TABLE D-3
MODERATE INCOME HOME PRICE ESTIMATES
CITY OF HAYWARD

Unit Size	3-Bedroom
Household Size	4-person HH
Median Income - Alameda County 2017	$97,400
Annual Income @ 110%	$107,140
% Available for Housing Costs	35%
Income Available for Housing Costs	$37,499
(Less) Property Taxes	($5,208)
(Less) HOA	($2,400)
(Less) Utilities	($1,536)
(Less) Insurance	($800)
(Less) Mortgage Insurance	($3,213)
Income Available for Mortgage	$24,342
Mortgage Amount	$377,900
Down Payment (homebuyer cash)	$13,700
Affordable Home Price	$391,600

Key Assumptions

- Mortgage Interest Rate	5.0%
- Down Payment	3.5%
- Property Taxes (% of sales price)	1.33%
- HOA (per month)	$200 (1)
- Utilities (per month)	$128 (2)
- Mortgage Insurance (% of loan amount)	0.85%

(1) HOA dues estimated based on new development projects currently on the market in Hayward.
(2) Utilities estimated based on utility allowance schedule from the Housing Authority of Alameda County.

TABLE D-4
SUPPORTED FEE / NEXUS SUMMARY
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

TOTAL NEXUS COST PER MARKET RATE UNIT

		Nexus Cost Per Market Rate Unit [3]			
		Prototype 1	Prototype 2	Prototype 3	Prototype 4
	Affordability Gap Per Unit	**Single Family Detached**	**Townhome**	**Condominium**	**Apartments**
Household Income Level					
Under 30% AMI	$278,200 [1]	$14,200	$12,400	$8,900	$8,000
30% to 50% AMI	$206,200 [1]	$24,400	$21,500	$15,200	$13,700
50% to 80% AMI	$170,200 [1]	$20,800	$18,300	$12,900	$11,600
80% to 120% AMI	$172,400 [2]	$12,800	$11,200	$7,900	$7,100
Total Supported Fee Per Unit		**$72,200**	**$63,400**	**$44,900**	**$40,400**

TOTAL NEXUS COST PER SQUARE FOOT[4]

	Nexus Cost Per Square Foot[4]			
	Prototype 1	Prototype 2	Prototype 3	Prototype 4
	Single Family Detached	**Townhome**	**Condominium**	**Apartments**
Avg. Unit Size (SF)	2,500 SF	2,000 SF	1,000 SF	900 SF
Household Income Level				
Under 30% AMI	$5.70	$6.20	$8.90	$8.90
30% to 50% AMI	$9.80	$10.80	$15.20	$15.20
50% to 80% AMI	$8.30	$9.20	$12.90	$12.90
80% to 120% AMI	$5.10	$5.60	$7.90	$7.90
Total Supported Fee Per Sq.Ft.	**$28.90**	**$31.80**	**$44.90**	**$44.90**

Notes:

[1] Assumes affordable rental units. Affordability gaps represent the remaining affordability gap after tax credit financing. See affordability gap section for details.

[2] Affordability gap for moderate income households based on ownership unit.

[3] Nexus cost per unit calculated by multiplying the affordable unit demand per market rate units from Table C-3 by the affordability gap.

[4] Nexus cost per square foot computed by dividing the nexus cost per unit from above by the average unit size.

III. ADDENDUM: ADDITIONAL BACKGROUND AND NOTES ON SPECIFIC ASSUMPTIONS

No Excess Supply of Affordable Housing

An assumption of this residential nexus analysis is that there is no excess supply of affordable housing available to absorb or offset new demand; therefore, new affordable units are needed to mitigate the new affordable housing demand generated by development of new market rate residential units. Based on a review of the current Census information for Hayward, conditions are consistent with this underlying assumption. According to the Census (2011 to 2015 ACS), approximately 48% of all households in the City were paying thirty percent or more of their income on housing. In addition, housing vacancy is minimal.

Geographic Area of Impact

The analysis quantifies impacts occurring within Alameda County. While many of the impacts will occur within the City, some impacts will be experienced elsewhere in Alameda County and beyond. The IMPLAN model computes the jobs generated within the county and sorts out those that occur beyond the county boundaries. The KMA Jobs Housing Nexus Model analyzes the income structure of jobs and their worker households, without assumptions as to where the worker households live.

In summary, the nexus analysis quantifies all the job impacts occurring within the county and related worker households. Job impacts, like most types of impacts, occur irrespective of political boundaries. And like other types of impact analyses, such as traffic, impacts beyond city boundaries may be mitigated by the city.

For clarification, counting all impacts associated with new housing units does not result in double counting, even if all jurisdictions were to adopt similar programs. The impact of a new housing unit is only counted once, in the jurisdiction in which it occurs. Obviously, within a metropolitan region such as the Bay Area, there is much commuting among jurisdictions, and cities house each other's workers in a very complex web of relationships. The important point is that impacts of residential development are only counted once.

Affordability Gap

The use of the affordability gap for establishing a maximum fee supported from the nexus analysis is grounded in the concept that a jurisdiction will be responsible for delivering affordable units to mitigate impacts. The nexus analysis has established that units will be needed at one or more different affordability levels and the type of unit to be delivered depends on the income/affordability level. In Hayward, the City is anticipated to assist in the development of rental units for households with incomes up to 80% of AMI and ownership units for moderate income households with incomes from 80% to 120% of AMI.

The units assisted by the public sector for affordable households are usually small in square foot area (for the number of bedrooms) and modest in finishes and amenities. As a result, in some communities these units are similar in physical configuration to what the market is delivering at market rate; in other communities (particularly very high income communities), they may be smaller and more modest than what the market is delivering. Parking, for example, is usually the minimum permitted by the code. Where there is a wide range in land cost per acre or per unit, it may be assumed that affordable units are built on land parcels in the lower portion of the cost range. KMA tries to develop a total development cost summary that represents the lower half of the average range, but not so low as to be unrealistic.

Excess Capacity of Labor Force

In the context of economic downturns such as the last recession, the question is sometimes raised as to whether there is excess capacity in the labor force to the extent that consumption impacts generated by new households will be in part, absorbed by existing jobs and workers, thus resulting in fewer net new jobs. In response, an impact analysis of this nature is a one-time impact requirement to address impacts generated over the life of the project. Recessions are temporary conditions; a healthy economy will return and the impacts will be experienced. The economic cycle also self-adjusts. Development of new residential units is likely to be reduced until conditions improve or there is confidence that improved conditions are imminent. When this occurs, the improved economic condition of the households in the local area will absorb the current underutilized capacity of existing workers, employed and unemployed. By the time new units become occupied, economic conditions will have likely improved.

The Burden of Paying for Affordable Housing

Hayward's inclusionary housing program does not place all burden for the creation of affordable housing on new residential construction. The burden of affordable housing is also borne by many sectors of the economy and society. A most important source of funding for affordable housing development comes from the federal government in the form of tax credits (which result in reduced income tax payment by tax credit investors in exchange for equity funding). Additionally, there are other federal grant and loan programs administered by the Department of Housing and Urban Development and other federal agencies. The State of California also plays a major role with a number of special financing and funding programs. Much of the state money is funded by voter approved bond measures paid for by all Californians.

Local governments play a large role in affordable housing. In addition, private sector lenders play an important role, some voluntarily and others less so with the requirements of the Community Reinvestment Act. Then there is the non-profit sector, both sponsors and developers that build much of the affordable housing.

In summary, all levels of government and many private parties, for profit and non-profit contribute to supplying affordable housing. Residential developers are not being asked to bear the burden alone any more than they are assumed to be the only source of demand or cause for needing affordable housing in our communities. Based on past experience, affordable housing requirements placed on residential development will satisfy only a small percentage of the affordable housing needs in the City of Hayward.

APPENDIX A: RESIDENTIAL MARKET SURVEY

I. INTRODUCTION

One of the underlying components of the Residential Nexus Study is the identification of residential building prototypes that are expected to be developed in Hayward both today and in the future, and what the market prices and rents for those prototypes will be. These market prices and rents are then used to estimate the incomes of the new households that will live in the new units and quantify the number and types of jobs created as a result of their demand for goods and services. In this Appendix A, KMA describes the residential building prototypes utilized for the analysis, summarizes the residential market data researched, and describes the market price point conclusions drawn therefrom.

II. RESIDENTIAL PROTOTYPES

KMA worked with City staff to select representative development prototypes envisioned to be developed in Hayward in the future. The following summarizes the basic characteristics of these prototypes.

Hayward Residential Prototypes				
	Typical Density	*Average Unit Size*	*Average Price/Rent*	*Price/Rent $/SF*
For-Sale Prototypes				
1) Single Family Detached	10 du/acre	2,500 sq. ft.	$950,000	$380/SF
2) Townhomes/Attached	20 du/acre	2,000 sq. ft.	$800,000	$400/SF
3) Condominiums (Stacked Flats)	50 du/acre	1,000 sq. ft.	$590,000	$590/SF
Rental Prototype				
4) Apartments	60 du/acre	900 sq. ft.	$2,800	$3.11/SF

Source: Prototype densities and unit sizes by KMA in collaboration with City of Hayward; rents and sale prices estimated by KMA.

The prototypes were developed largely based upon the characteristics of residential development projects recently built and in the development pipeline in Hayward. The following table lists the development pipeline projects in Hayward, which is illustrative of the range of housing types and the geographic dispersion of projects throughout the City.

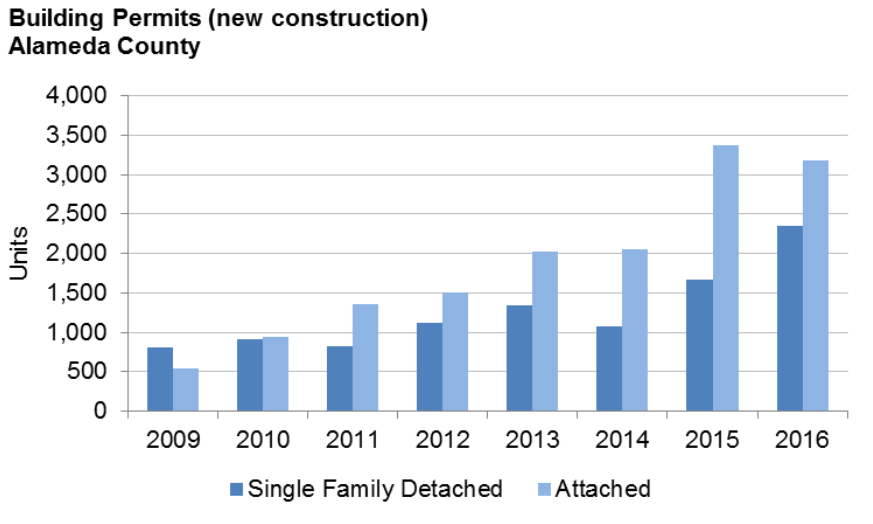
Development Pipeline Projects, City of Hayward		
Project	*Address*	*Unit Type*
Maple & Main	22455 Main St	High Density Apartments (mixed use)
Lincoln Landing	22301 Foothill Blvd	High Density Apartments (mixed use)
Campways	28168 Mission Blvd	Apartments
Mission Seniors	29312 Mission Blvd	High Density Condos & Single Family
Matyas Village	22634 Second St	High Density Condos
Mission Village	411 Industrial Pkwy	Townhomes
Haymont Village	Mission & Sorenson (NWC)	Townhomes & Apartments
Mission Crossings	25501 Mission Blvd	Townhomes & Hotel
Ward Creek Cottages	Walpert & 2nd (SWC)	Single Family Detached
Hesperian	2475 Hesperian Blvd	Single Family Detached

Source: City of Hayward

III. MARKET SURVEY & PRICING ESTIMATES

A. Residential Building Activity

The City of Hayward and Alameda County as a whole have experienced significant new residential development in the years following the recession. New development has taken the form of both low-density single family detached homes, which is characteristic of the historic development patterns in suburban portions of the county, as well as higher density attached homes, condominiums, and multi-family apartments. Only in recent years have real estate market conditions supported the development of higher density multi-family projects in Hayward and other suburban East Bay communities. As shown in the table above, there are higher density multi-family projects in Hayward's development pipeline today.

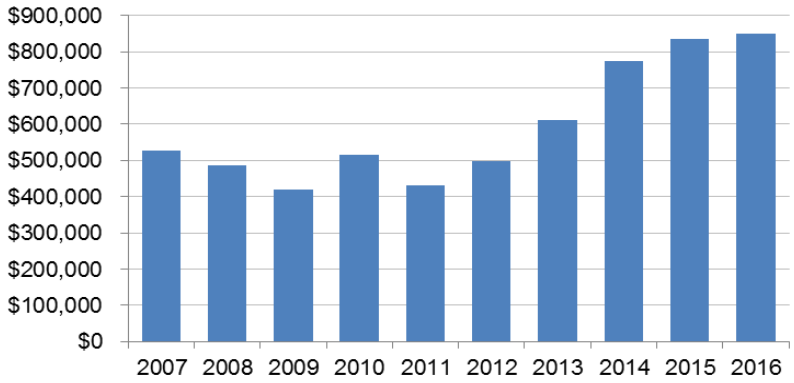


Source: Real Estate Research Council

Overview of For-Sale Market

Home prices in Hayward and throughout Alameda County have risen significantly in the last several years due to the strength of the regional economy, low mortgage interest rates, and limited housing market supply. New home prices now well exceed pre-recession levels, even on an inflation adjusted basis, although the pace of price escalation has moderated in more recent years.

New Home Prices
Alameda County

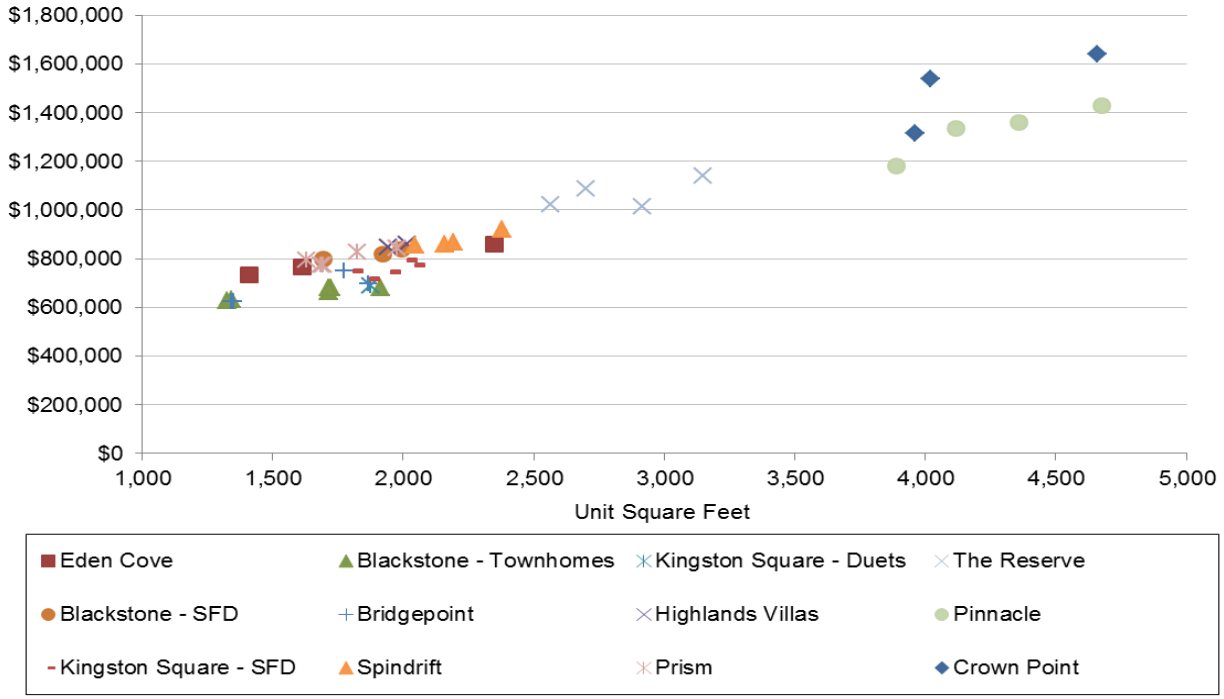


Source: Dataquick

B. Recent Home Prices of Newly Built Units

At the time of the market survey in mid-July 2017, 12 new for-sale housing developments were being tracked by market data firm Real Estate Economics. Most of the new homes on the market were attached townhome-type units and single family detached homes up to 2,500 square feet. There were two developments in the Hayward hills with large homes in the 4,000 to 5,000 square feet range. There were no stacked flat condominiums on the market.

Sale Prices of New Home Developments
City of Hayward



Source: Real Estate Economics (July 2017)

C. For-Sale Prototype Price Estimates

The sale prices of new homes on the market, combined with an analysis of resales of existing homes, formed the basis for KMA's price estimates. It is noted that there were no comparable units on the market for the stacked flat condominium prototype. Therefore, pricing for this prototype was estimated based upon smaller townhome-type units on the market and adjusted for unit size, density, and location.

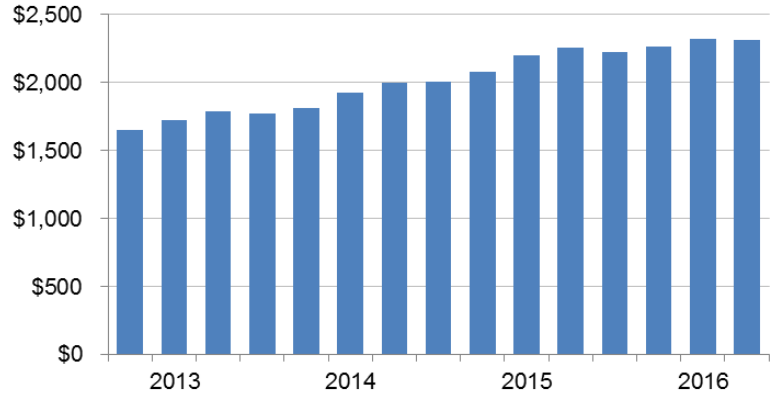
The table below summarizes KMA's conclusions regarding for-sale prototype unit sizes and pricing.

For-Sale Prototype Price Estimates			
	Unit Size	*Price*	*$/SF*
Single Family Detached	2,500 sq. ft.	$950,000	$380
Townhomes/Attached	2,000 sq. ft.	$800,000	$400
Condominiums (Stacked Flats)	1,000 sq. ft.	$590,000	$590

D. Rental Housing Market

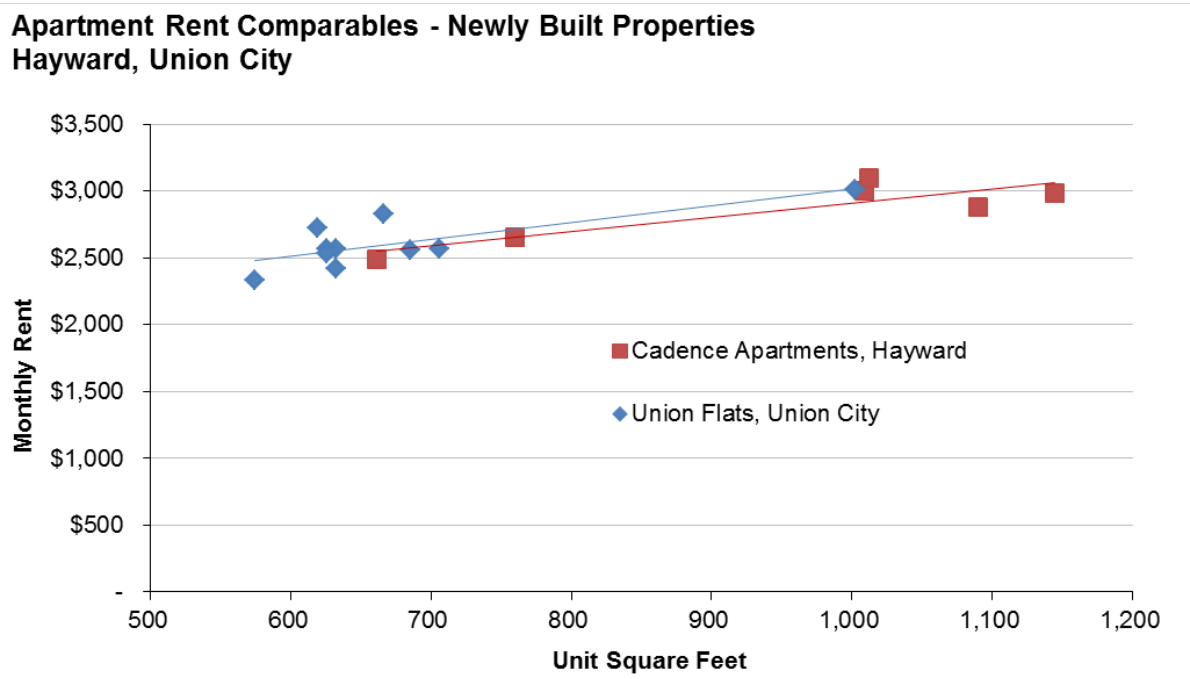
In recent years, apartment market conditions have improved throughout Alameda County as exhibited by rising rents and occupancy rates. In addition, new development projects have been built and are in the development pipeline throughout the county, particularly near public transit and in mixed use downtown settings where access to job centers and neighborhood services is convenient. For example, new apartment developments were recently completed near the South Hayward and Union City BART Stations (The Cadence and Union Flats). Four market rate rental developments are current in the City of Hayward's development pipeline including Lincoln Landing, Maple and Main, Campways and Haymont Village (also includes townhomes).

Average Apartment Rents (Quarterly)
Alameda County



Source: RealAnswers

Current market rents for the Cadence and Union Flats projects are shown in the chart below. Based on these rent comps, KMA estimates the average monthly rent for the apartment prototype (new construction) would be in the range of $2,800 for the 900 square foot apartment prototype.



Source: On-line listings (July 2017)
Further survey detail is provided in Appendix Table 2.

Supporting data on new home sales, apartment rents, and pipeline projects in Hayward is provided in Appendix A Tables 1 to 3.

Appendix Table A-1
Sales Prices for New Homes in Hayward
City of Hayward **DRAFT**

Project	Plan Type	Units Released	No. of Beds	Living Area	Asking Sales Price	$/SF	HOA
New Single Family Homes							
Highlands Villas - SFD	Plan 1	9	3	1,942	$848,000	$437	$230
Grupe Homes	Plan 2	5	4	2,014	$859,000	$427	
Spindrift - SFD	Plan 1	12	3	2,046	$855,990	$418	$35
Pulte Homes	Plan 2	11	4	2,160	$857,990	$397	
	Plan 3	13	4	2,193	$867,990	$396	
	Plan 4	11	4	2,377	$919,990	$387	
The Reserve	Plan 1	6	4	2,566	$1,019,880	$397	$175
DR Horton	Plan 2	4	3	2,701	$1,085,880	$402	
	Plan 3	6	5	2,915	$1,013,880	$348	
	Plan 4	3	4	3,150	$1,138,880	$362	
Prism	Plan 1	3	3	1,632	$794,965	$487	$127
Meritage Homes	Plan 2	2	4	1,684	$774,965	$460	
	Plan 3	1	4	1,693	$773,950	$457	
	Plan 4	2	4	1,824	$824,950	$452	
	Plan 5	1	4	1,978	$840,950	$425	
	Plan 6	1	4	1,979	$840,950	$425	
Pinnacle	Plan 1	9	5	3,891	$1,179,950	$303	$230
Meritage Homes	Plan 2	23	4	4,117	$1,334,950	$324	
	Plan 3	28	5	4,358	$1,359,950	$312	
	Plan 4	19	4	4,674	$1,429,950	$306	
Crown Point	Plan 1	19	4	3,961	$1,315,000	$332	$230
Brookfield	Plan 2	16	5	4,021	$1,540,000	$383	
	Plan 3	17	5	4,657	$1,640,000	$352	
Blackstone	Plan 1	18	3	1,692	$796,900	$471	$240
Tri Pointe Homes	Plan 2	14	3	1,922	$819,900	$427	
	Plan 3	12	4	1,995	$837,900	$420	
Kingston Square	Plan 1	6	4	1,814	$751,000	$414	$188
Meritage Homes	Plan 2	3	4	1,876	$717,000	$382	
	Plan 3	4	3	1,958	$747,000	$382	
	Plan 4	7	4	2,021	$792,000	$392	
	Plan 5	5	4	2,047	$772,000	$377	
Eden Cove	Plan 1	7	3	1,410	$733,686	$520	$238
KB Home	Plan 2	3	3	1,613	$765,993	$475	
	Plan 3	5	3	2,350	$860,400	$366	
New Attached Townhomes and Duets							
Blackstone - Townhomes	Plan 1	2	2	1,344	$629,370	$468	$240
TRI Ponte	Plan 2	2	3	1,326	$628,210	$474	
	Plan 3	17	3	1,723	$679,385	$394	
	Plan 4	12	3	1,716	$665,900	$388	
	Plan 5	10	3	1,716	$681,900	$397	
	Plan 6	13	3	1,915	$681,900	$356	
Kingston Square - Duets	Plan 1	10	4	1,876	$689,450	$368	$188
Meritage Homes							
Bridgepoint - Duets	Plan 1	1	2	1,341	$625,000	$466	$157
Nuvera Homes	Plan 2	1	2	1,350	$625,000	$463	
	Plan 3	2	3	1,774	$749,000	$422	
	Plan 4	1	4	1,866	$695,000	$372	

Source: Real Estate Economics (July 2017)

Appendix Table A-2
Apartment Rental Comps
City of Hayward **DRAFT**

	Sq. Ft.	Monthly Rent Low		High	$/SF Low		High	Notes
Cadence Apartments, Hayward								
1 Bd / 1 Ba	661	$2,375	-	$2,605	$3.59	-	$3.94	28850 Dixon Street, Hayward
1 Bd / 1 Ba	760	$2,615	-	$2,690	$3.44	-	$3.54	(S. Hayward BART)
2 Bd / 2 Ba	1,009	$2,900	-	$3,100	$2.87	-	$3.07	2016
2 Bd / 2 Ba	1,012	$3,100	-	$3,100	$3.06	-	$3.06	206 Units
2 Bd / 2 Ba	1,090	$2,880	-	$2,880	$2.64	-	$2.64	
2 Bd / 2 Ba	1,145	$2,985	-	$2,985	$2.61	-	$2.61	
Union Flats, Union City								
Studio	574	$2,330	-	$2,330	$4.06	-	$4.06	34588 11th Street, Union City
Studio	632	$2,390	-	$2,445	$3.78	-	$3.87	(Union City BART)
Studio	632	$2,570	-	$2,570	$4.07	-	$4.07	2017
1 Bd / 1 Ba	619	$2,720	-	$2,720	$4.39	-	$4.39	243 Units
1 Bd / 1 Ba	626	$2,530	-	$2,605	$4.04	-	$4.16	
1 Bd / 1 Ba	626	$2,530	-	$2,530	$4.04	-	$4.04	
1 Bd / 1 Ba	666	$2,825	-	$2,825	$4.24	-	$4.24	
1 Bd / 1 Ba	685	$2,555	-	$2,555	$3.73	-	$3.73	
1 Bd / 1 Ba	706	$2,570	-	$2,570	$3.64	-	$3.64	
2 Bd / 2 Ba	1002	$3,010	-	$3,010	$3.00	-	$3.00	

Appendix Table A-3
Pipeline Residential Projects
City of Hayward **DRAFT**

Project Info	Plan Type	# of Beds	# of units	Living Area
Mission Village				
Townhomes	Plan 1	3+Loft	13	1953 SF
w/ retail	Plan 2	3+Den	17	2094 SF
Doug Rich + Valley Oak Partners	Plan 3	3+Den	11	2111 SF
30' to roof eave	Plan 4	3+Den	12	2042 SF
Type V: R2 occupancy	Plan 5	3+Den	4	2108 SF
Parking: 2 spaces per unit	Plan 6	4	4	2216 SF
	Plan 7	3	7	1608 SF
	Plan 8	4+Loft	4	1930 SF
Total / Average			72	2014 SF
Site Area			3.3	*Acres*
Density			21.8	*du/acre*
Mission Crossings				
Townhomes	Plan 1	2	31	1437 SF
w/ hotel	Plan 2	4	18	2021 SF
Justin Derby w/ MLC Holdings	Plan 3	4	27	2110 SF
36' tall	Plan 4	4	27	2150 SF
Type V	Plan 5	4	37	1889 SF
Total / Average			140	1899 SF
Site Area			7.39	*Acres*
Density			19	*du/acre*
Matyas Villas (Guru Thalagangni)				
Stacked flat condominiums	Plan 1	2	15	830 SF
w/ ground floor comm.	Plan 2	3	42	1110 SF
2298 SF ground floor retail				
55' tall, Parking: 86 stalls				
Total / Average			57	1036 SF
Site Area			0.93	*Acres*
Density			61	*du/acre*
Mission Seniors				
stacked flat condos for seniors (mkt rate)	Plan 1	Studio	1	601 SF
57' tall	Plan 2	1	72	-
Type 1A, VA Construction	Plan 3	2	98	-
Parking: 259 stalls	Plan 4	3	29	1701 SF
Total / Average			200	N/A
Site Area			4.8	*Acres*
Density			41.7	*du/acre*

Project Info	Plan Type	# of Beds	# of units	Living Area
Haymont Village	Townhomes			
Townhomes and rental apartments	Plan 1	3	5	1735 SF
Ray Panek w/ KB Home	Plan 2	3	16	1823 SF
Townhomes: 35'	Plan 3	3	14	*2074 SF*
Apartments: 50'			35	1911 SF
Type V construction				
	Apartments			
	Plan 1	1	9	692 SF
	Plan 2	1	3	779 SF
	Plan 3	1	3	655 SF
	Plan 4	1	3	785 SF
	Plan 5	2	21	1012 SF
			39	875 SF
Total units			74	*units*
Density			35	*du/acre*
Ward Creek Cottages				
Single Family Detached	Plan 1	3	-	1941 SF
34' - 37'	Plan 2	3	-	1868 SF
VB Construction	Plan 3	3	-	2007 SF
Parking: 2 spaces per unit	Plan 4	5	-	2431 SF
Site Area			14.9	*Acres*
Park/ Open Space			7.44	*Acres*
Hesperian				
Single Family	Plan 1	4	-	2240 SF
27'	Plan 2	4	-	2550 SF
VB Construction				
Parking: 2 spaces per unit				
Net Density			8.5	*du/acre*

Project Info	Plan Type	# of Beds	# of units	Living Area
Lincoln Landing				
Market Rate Apartments	Plan 1	Studio	12	590 SF
Dollinger Properties	Plan 2	1	334	750 SF
22' - 84.5' Height	Plan 3	2	102	1250 SF
Type 1A ground floor	Plan 4	3	28	1350 SF
Type IIIA on upper levels				
Parking: 863 Stalls				
1.8 stalls per unit				
Total Units			476	*units*
Site Area			11.3	*Acres*
Density			42	*du/acre*
Maple and Main				
Mrkt. rate and Aff. Apts	Plan 1	Studio	15	568
Bay Area Property Developers	Plan 2	1	82	582 SF
58' Height	Plan 3	2	123	930 SF
Type IIIA Construction	Plan 4	2	20	1100 SF
5 story parking structure				
Total Parking: 481				
Res Parking: 1.36/unit				
Total Units			240	*units*
Site Area			3.93	*Acres*
Density			61	*du/acre*
Campways				
Market Rate apts w/ retail	Plan 1	Studio	3	541 SF
JC Martin Company	Plan 2	1	40	661 SF
4 stories, 60' height	Plan 3	1	4	759 SF
Type V construction	Plan 4	2	33	1021 SF
Res. Parking: 1.11/unit	Plan 5	2	7	1017 SF
	Plan 6	2	6	976 SF
	Plan 7	3	4	1571 SF
Total units			97	*units*
Site Area			1.81	*Acres*
Density			54	*du/acre*
808 A Street				
Affordable Senior Apartments	Plan 1	1	45	561 SF
Meta Housing	Plan 2	2	15	754 SF
56' Height				
Type V Construction				
Parking 0.5/unit				
Total units			60	*units*
			65	*max du/acre*

Source: City of Hayward

APPENDIX B: WORKER OCCUPATIONS AND COMPENSATION LEVELS

RESIDENTIAL NEXUS APPENDIX B TABLE 1
WORKER OCCUPATION DISTRIBUTION, 2016
SERVICES TO HOUSEHOLDS EARNING $100 - $150K, RESIDENT SERVICES
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Major Occupations (2% or more)	Worker Occupation Distribution[1] Services to Households Earning $100,000 to $150,000
Management Occupations	*4.3%*
Business and Financial Operations Occupations	*4.3%*
Education, Training, and Library Occupations	*3.1%*
Healthcare Practitioners and Technical Occupations	*7.5%*
Healthcare Support Occupations	*4.6%*
Food Preparation and Serving Related Occupations	*13.9%*
Building and Grounds Cleaning and Maintenance Occupations	*5.0%*
Personal Care and Service Occupations	*6.7%*
Sales and Related Occupations	*12.2%*
Office and Administrative Support Occupations	*15.3%*
Installation, Maintenance, and Repair Occupations	*3.8%*
Transportation and Material Moving Occupations	*6.0%*
All Other Worker Occupations - Services to Households Earning $100,000 to $150,000	*13.4%*
INDUSTRY TOTAL	100.0%

[1] Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

Source: Bureau of Labor Statistics, IMPLAN
Keyser Marston Associates, Inc.
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RESIDENTIAL NEXUS APPENDIX B TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 1 of 4			
Management Occupations			
Chief Executives	$232,400	3.0%	0.1%
General and Operations Managers	$147,300	35.4%	1.5%
Sales Managers	$157,500	4.5%	0.2%
Administrative Services Managers	$110,400	3.4%	0.1%
Financial Managers	$162,800	8.1%	0.3%
Food Service Managers	$50,200	4.9%	0.2%
Medical and Health Services Managers	$134,700	6.4%	0.3%
Property, Real Estate, and Community Association Managers	$102,400	8.7%	0.4%
Social and Community Service Managers	$78,200	3.6%	0.2%
Managers, All Other	$147,100	3.4%	0.1%
All other Management Occupations (Avg. All Categories)	$136,300	18.5%	0.8%
Weighted Mean Annual Wage	***$136,300***	**100.0%**	**4.3%**
Business and Financial Operations Occupations			
Claims Adjusters, Examiners, and Investigators	$79,500	3.3%	0.1%
Human Resources Specialists	$79,600	5.8%	0.2%
Management Analysts	$109,400	6.0%	0.3%
Training and Development Specialists	$86,000	3.8%	0.2%
Market Research Analysts and Marketing Specialists	$86,600	7.9%	0.3%
Business Operations Specialists, All Other	$88,600	9.5%	0.4%
Accountants and Auditors	$89,600	17.7%	0.8%
Financial Analysts	$105,500	7.3%	0.3%
Personal Financial Advisors	$182,600	9.6%	0.4%
Loan Officers	$100,900	4.4%	0.2%
All Other Business and Financial Operations Occupations (Avg. All Categories)	$103,400	24.7%	1.1%
Weighted Mean Annual Wage	***$103,400***	**100.0%**	**4.3%**
Education, Training, and Library Occupations			
Vocational Education Teachers, Postsecondary	$70,700	4.3%	0.1%
Preschool Teachers, Except Special Education	$37,500	16.3%	0.5%
Elementary School Teachers, Except Special Education	$76,300	6.8%	0.2%
Secondary School Teachers, Except Special and Career/Technical Education	$74,100	4.7%	0.1%
Self-Enrichment Education Teachers	$54,300	13.3%	0.4%
Teachers and Instructors, All Other, Except Substitute Teachers	$42,600	8.7%	0.3%
Substitute Teachers	$43,200	3.9%	0.1%
Teacher Assistants	$34,200	15.3%	0.5%
All Other Education, Training, and Library Occupations (Avg. All Categories)	$48,700	26.7%	0.8%
Weighted Mean Annual Wage	***$48,700***	**100.0%**	**3.1%**

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
Keyser Marston Associates, Inc.
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RESIDENTIAL NEXUS APPENDIX B TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 2 of 4			
Healthcare Practitioners and Technical Occupations			
Pharmacists	$139,600	3.5%	0.3%
Physicians and Surgeons, All Other	$225,500	3.9%	0.3%
Physical Therapists	$95,400	3.4%	0.3%
Registered Nurses	$119,400	29.4%	2.2%
Dental Hygienists	$104,200	4.2%	0.3%
Pharmacy Technicians	$46,200	4.8%	0.4%
Licensed Practical and Licensed Vocational Nurses	$57,900	8.7%	0.7%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categorie	$110,000	41.9%	3.1%
Weighted Mean Annual Wage	***$110,000***	**100.0%**	**7.5%**
Healthcare Support Occupations			
Home Health Aides	$30,300	22.9%	1.0%
Nursing Assistants	$35,800	29.8%	1.4%
Massage Therapists	$53,500	4.4%	0.2%
Dental Assistants	$43,100	10.9%	0.5%
Medical Assistants	$43,000	15.3%	0.7%
All Other Healthcare Support Occupations (Avg. All Categories)	$37,500	16.7%	0.8%
Weighted Mean Annual Wage	***$37,500***	**100.0%**	**4.6%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	$42,400	6.9%	1.0%
Cooks, Fast Food	$23,900	3.8%	0.5%
Cooks, Restaurant	$28,300	8.8%	1.2%
Food Preparation Workers	$26,700	6.5%	0.9%
Bartenders	$33,800	6.8%	0.9%
Combined Food Preparation and Serving Workers, Including Fast Food	$25,500	25.9%	3.6%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	$25,800	3.5%	0.5%
Waiters and Waitresses	$34,200	19.3%	2.7%
Dishwashers	$25,700	3.9%	0.6%
All Other Food Preparation and Serving Related Occupations (Avg. All Categorie	$29,800	14.6%	2.0%
Weighted Mean Annual Wage	***$29,800***	**100.0%**	**13.9%**

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
Keyser Marston Associates, Inc.
\\SF-FS2\wp\14\14006\007\Hayward Residential Nexus 9-19-17; 10/31/2017; dd

RESIDENTIAL NEXUS APPENDIX B TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 3 of 4			
Building and Grounds Cleaning and Maintenance Occupations			
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Worl	$57,600	3.6%	0.2%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	$36,200	44.5%	2.2%
Maids and Housekeeping Cleaners	$34,300	10.7%	0.5%
Landscaping and Groundskeeping Workers	$34,800	32.4%	1.6%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. Al	$36,300	8.7%	0.4%
Weighted Mean Annual Wage	***$36,300***	**100.0%**	**5.0%**
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service Workers	$51,300	3.9%	0.3%
Nonfarm Animal Caretakers	$26,800	6.7%	0.5%
Hairdressers, Hairstylists, and Cosmetologists	$33,700	14.9%	1.0%
Manicurists and Pedicurists	$25,000	4.0%	0.3%
Childcare Workers	$29,800	10.4%	0.7%
Personal Care Aides	$28,700	35.7%	2.4%
Fitness Trainers and Aerobics Instructors	$47,500	6.1%	0.4%
Recreation Workers	$33,000	4.3%	0.3%
All Other Personal Care and Service Occupations (Avg. All Categories)	$32,000	13.9%	0.9%
Weighted Mean Annual Wage	***$32,000***	**100.0%**	**6.7%**
Sales and Related Occupations			
First-Line Supervisors of Retail Sales Workers	$49,600	8.8%	1.1%
Cashiers	$26,700	25.7%	3.1%
Counter and Rental Clerks	$38,300	5.0%	0.6%
Retail Salespersons	$30,800	34.6%	4.2%
Sales Representatives, Services, All Other	$65,800	5.2%	0.6%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Sci	$71,000	5.3%	0.7%
All Other Sales and Related Occupations (Avg. All Categories)	$36,600	15.3%	1.9%
Weighted Mean Annual Wage	***$36,600***	**100.0%**	**12.2%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$67,100	6.6%	1.0%
Bookkeeping, Accounting, and Auditing Clerks	$51,600	7.3%	1.1%
Customer Service Representatives	$45,300	11.4%	1.7%
Receptionists and Information Clerks	$36,100	8.2%	1.2%
Stock Clerks and Order Fillers	$30,000	10.5%	1.6%
Medical Secretaries	$46,000	4.1%	0.6%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	$45,600	11.1%	1.7%
Office Clerks, General	$39,000	14.3%	2.2%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$43,600	26.5%	4.0%
Weighted Mean Annual Wage	***$43,600***	**100.0%**	**15.3%**

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
Keyser Marston Associates, Inc.
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RESIDENTIAL NEXUS APPENDIX B TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 4 of 4			
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$83,400	7.9%	0.3%
Telecommunications Equipment Installers and Repairers, Except Line Installers	$62,700	3.2%	0.1%
Automotive Body and Related Repairers	$51,000	6.7%	0.3%
Automotive Service Technicians and Mechanics	$53,800	19.8%	0.7%
Bus and Truck Mechanics and Diesel Engine Specialists	$56,100	4.3%	0.2%
Maintenance and Repair Workers, General	$48,200	31.0%	1.2%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories	$54,900	27.2%	1.0%
Weighted Mean Annual Wage	***$54,900***	**100.0%**	**3.8%**
Transportation and Material Moving Occupations			
Bus Drivers, School or Special Client	$38,300	4.8%	0.3%
Driver/Sales Workers	$41,000	6.3%	0.4%
Heavy and Tractor-Trailer Truck Drivers	$49,900	15.1%	0.9%
Light Truck or Delivery Services Drivers	$41,400	10.0%	0.6%
Taxi Drivers and Chauffeurs	$32,100	3.1%	0.2%
Parking Lot Attendants	$31,200	7.0%	0.4%
Industrial Truck and Tractor Operators	$41,500	3.3%	0.2%
Cleaners of Vehicles and Equipment	$28,000	7.4%	0.4%
Laborers and Freight, Stock, and Material Movers, Hand	$35,000	20.3%	1.2%
Packers and Packagers, Hand	$27,400	6.0%	0.4%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	$37,800	16.8%	1.0%
Weighted Mean Annual Wage	***$37,800***	**100.0%**	**6.0%**
			86.6%

[1] The methodology utilized by the California Employment Development Department (EDD) assumes that hourly paid employees are employed full-time. Annual compensation is calculated by EDD by multiplying hourly wages by 40 hours per work week by 52 weeks.

[2] Occupation percentages are based on the 2016 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2016 Occupational Employment Survey data applicable to Alameda County updated by the California Employment Development Department to 2017 wage levels.

[3] Including occupations representing 3% or more of the major occupation group

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
Keyser Marston Associates, Inc.
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RESIDENTIAL NEXUS APPENDIX B TABLE 3
WORKER OCCUPATION DISTRIBUTION, 2016
SERVICES TO HOUSEHOLDS EARNING $150K+, RESIDENT SERVICES
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Major Occupations (2% or more)	Worker Occupation Distribution[1] Services to Households Earning $150,000 and up
Management Occupations	*4.3%*
Business and Financial Operations Occupations	*4.4%*
Education, Training, and Library Occupations	*4.3%*
Healthcare Practitioners and Technical Occupations	*6.7%*
Healthcare Support Occupations	*4.1%*
Food Preparation and Serving Related Occupations	*13.2%*
Building and Grounds Cleaning and Maintenance Occupations	*5.1%*
Personal Care and Service Occupations	*6.8%*
Sales and Related Occupations	*12.2%*
Office and Administrative Support Occupations	*15.2%*
Installation, Maintenance, and Repair Occupations	*3.7%*
Transportation and Material Moving Occupations	*6.2%*
All Other Worker Occupations - Services to Households Earning $150,000 and up	*13.8%*
INDUSTRY TOTAL	100.0%

[1] Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

Source: Bureau of Labor Statistics, IMPLAN
Keyser Marston Associates, Inc.
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RESIDENTIAL NEXUS APPENDIX B TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $150,000 AND UP
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 1 of 4			
Management Occupations			
Chief Executives	$232,400	3.0%	0.1%
General and Operations Managers	$147,300	35.6%	1.5%
Sales Managers	$157,500	4.5%	0.2%
Administrative Services Managers	$110,400	3.5%	0.1%
Financial Managers	$162,800	8.1%	0.3%
Food Service Managers	$50,200	4.6%	0.2%
Medical and Health Services Managers	$134,700	5.6%	0.2%
Property, Real Estate, and Community Association Managers	$102,400	8.0%	0.3%
Social and Community Service Managers	$78,200	3.6%	0.2%
Managers, All Other	$147,100	3.5%	0.2%
All other Management Occupations (Avg. All Categories)	$137,000	20.0%	0.9%
Weighted Mean Annual Wage	***$137,000***	**100.0%**	**4.3%**
Business and Financial Operations Occupations			
Claims Adjusters, Examiners, and Investigators	$79,500	3.4%	0.2%
Human Resources Specialists	$79,600	5.7%	0.2%
Management Analysts	$109,400	5.9%	0.3%
Training and Development Specialists	$86,000	4.1%	0.2%
Market Research Analysts and Marketing Specialists	$86,600	7.7%	0.3%
Business Operations Specialists, All Other	$88,600	9.6%	0.4%
Accountants and Auditors	$89,600	17.5%	0.8%
Financial Analysts	$105,500	7.2%	0.3%
Personal Financial Advisors	$182,600	9.6%	0.4%
Loan Officers	$100,900	4.4%	0.2%
All Other Business and Financial Operations Occupations (Avg. All Categ	$103,300	24.9%	1.1%
Weighted Mean Annual Wage	***$103,300***	**100.0%**	**4.4%**
Education, Training, and Library Occupations			
Vocational Education Teachers, Postsecondary	$70,700	4.6%	0.2%
Preschool Teachers, Except Special Education	$37,500	16.0%	0.7%
Elementary School Teachers, Except Special Education	$76,300	6.7%	0.3%
Secondary School Teachers, Except Special and Career/Technical Educa	$74,100	4.7%	0.2%
Self-Enrichment Education Teachers	$54,300	13.1%	0.6%
Teachers and Instructors, All Other, Except Substitute Teachers	$42,600	8.9%	0.4%
Substitute Teachers	$43,200	3.8%	0.2%
Teacher Assistants	$34,200	14.9%	0.6%
All Other Education, Training, and Library Occupations (Avg. All Categorie	$48,800	27.4%	1.2%
Weighted Mean Annual Wage	***$48,800***	**100.0%**	**4.3%**

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
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RESIDENTIAL NEXUS APPENDIX B TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $150,000 AND UP
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Healthcare Practitioners and Technical Occupations			
Pharmacists	$139,600	3.9%	0.3%
Physicians and Surgeons, All Other	$225,500	3.8%	0.3%
Physical Therapists	$95,400	3.3%	0.2%
Registered Nurses	$119,400	28.9%	1.9%
Dental Hygienists	$104,200	4.1%	0.3%
Pharmacy Technicians	$46,200	5.3%	0.4%
Licensed Practical and Licensed Vocational Nurses	$57,900	8.6%	0.6%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Ca	$109,500	42.0%	2.8%
Weighted Mean Annual Wage	***$109,500***	**100.0%**	**6.7%**
Healthcare Support Occupations			
Home Health Aides	$30,300	23.7%	1.0%
Nursing Assistants	$35,800	29.4%	1.2%
Massage Therapists	$53,500	4.4%	0.2%
Dental Assistants	$43,100	10.6%	0.4%
Medical Assistants	$43,000	14.9%	0.6%
Veterinary Assistants and Laboratory Animal Caretakers	$34,900	3.0%	0.1%
All Other Healthcare Support Occupations (Avg. All Categories)	$37,300	14.1%	0.6%
Weighted Mean Annual Wage	***$37,300***	**100.0%**	**4.1%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	$42,400	6.8%	0.9%
Cooks, Fast Food	$23,900	3.8%	0.5%
Cooks, Restaurant	$28,300	8.8%	1.2%
Food Preparation Workers	$26,700	6.5%	0.9%
Bartenders	$33,800	6.8%	0.9%
Combined Food Preparation and Serving Workers, Including Fast Food	$25,500	25.8%	3.4%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	$25,800	3.6%	0.5%
Waiters and Waitresses	$34,200	19.2%	2.5%
Dishwashers	$25,700	3.9%	0.5%
All Other Food Preparation and Serving Related Occupations (Avg. All Ca	$29,800	14.7%	1.9%
Weighted Mean Annual Wage	***$29,800***	**100.0%**	**13.2%**

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
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RESIDENTIAL NEXUS APPENDIX B TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $150,000 AND UP
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 3 of 4			
Building and Grounds Cleaning and Maintenance Occupations			
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeepir	$57,600	3.7%	0.2%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	$36,200	45.0%	2.3%
Maids and Housekeeping Cleaners	$34,300	10.0%	0.5%
Landscaping and Groundskeeping Workers	$34,800	32.6%	1.7%
All Other Building and Grounds Cleaning and Maintenance Occupations (.	$36,400	8.8%	0.4%
Weighted Mean Annual Wage	***$36,400***	**100.0%**	**5.1%**
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service Workers	$51,300	4.0%	0.3%
Nonfarm Animal Caretakers	$26,800	7.1%	0.5%
Hairdressers, Hairstylists, and Cosmetologists	$33,700	13.2%	0.9%
Manicurists and Pedicurists	$25,000	3.5%	0.2%
Childcare Workers	$29,800	13.1%	0.9%
Personal Care Aides	$28,700	34.2%	2.3%
Fitness Trainers and Aerobics Instructors	$47,500	6.7%	0.5%
Recreation Workers	$33,000	4.3%	0.3%
All Other Personal Care and Service Occupations (Avg. All Categories)	$32,000	14.0%	1.0%
Weighted Mean Annual Wage	***$32,000***	**100.0%**	**6.8%**
Sales and Related Occupations			
First-Line Supervisors of Retail Sales Workers	$49,600	8.9%	1.1%
Cashiers	$26,700	25.8%	3.2%
Counter and Rental Clerks	$38,300	4.8%	0.6%
Retail Salespersons	$30,800	34.9%	4.3%
Sales Representatives, Services, All Other	$65,800	5.2%	0.6%
Sales Representatives, Wholesale and Manufacturing, Except Technical a	$71,000	5.3%	0.7%
All Other Sales and Related Occupations (Avg. All Categories)	$36,600	15.2%	1.9%
Weighted Mean Annual Wage	***$36,600***	**100.0%**	**12.2%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$67,100	6.6%	1.0%
Bookkeeping, Accounting, and Auditing Clerks	$51,600	7.3%	1.1%
Customer Service Representatives	$45,300	11.5%	1.8%
Receptionists and Information Clerks	$36,100	7.7%	1.2%
Stock Clerks and Order Fillers	$30,000	10.6%	1.6%
Medical Secretaries	$46,000	3.6%	0.6%
Secretaries and Administrative Assistants, Except Legal, Medical, and Ex	$45,600	11.4%	1.7%
Office Clerks, General	$39,000	14.5%	2.2%
All Other Office and Administrative Support Occupations (Avg. All Catego	$43,500	26.8%	4.1%
Weighted Mean Annual Wage	***$43,500***	**100.0%**	**15.2%**

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
Keyser Marston Associates, Inc.
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RESIDENTIAL NEXUS APPENDIX B TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2017
SERVICES TO HOUSEHOLDS EARNING $150,000 AND UP
RESIDENTIAL NEXUS ANALYSIS
HAYWARD, CA

Occupation [3]	2017 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 4 of 4			
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$83,400	7.8%	0.3%
Automotive Body and Related Repairers	$51,000	6.5%	0.2%
Automotive Service Technicians and Mechanics	$53,800	19.6%	0.7%
Bus and Truck Mechanics and Diesel Engine Specialists	$56,100	4.5%	0.2%
Maintenance and Repair Workers, General	$48,200	30.5%	1.1%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Cat	$54,600	31.2%	1.1%
Weighted Mean Annual Wage	***$54,600***	**100.0%**	**3.7%**
Transportation and Material Moving Occupations			
Bus Drivers, School or Special Client	$38,300	5.7%	0.3%
Driver/Sales Workers	$41,000	5.9%	0.4%
Heavy and Tractor-Trailer Truck Drivers	$49,900	15.1%	0.9%
Light Truck or Delivery Services Drivers	$41,400	9.8%	0.6%
Taxi Drivers and Chauffeurs	$32,100	3.3%	0.2%
Parking Lot Attendants	$31,200	7.3%	0.4%
Industrial Truck and Tractor Operators	$41,500	3.2%	0.2%
Cleaners of Vehicles and Equipment	$28,000	6.9%	0.4%
Laborers and Freight, Stock, and Material Movers, Hand	$35,000	19.8%	1.2%
Packers and Packagers, Hand	$27,400	5.9%	0.4%
All Other Transportation and Material Moving Occupations (Avg. All Categ	$37,800	17.2%	1.1%
Weighted Mean Annual Wage	***$37,800***	**100.0%**	**6.2%**
			86.2%

[1] The methodology utilized by the California Employment Development Department (EDD) assumes that hourly paid employees are employed full-time. Annual compensation is calculated by EDD by multiplying hourly wages by 40 hours per work week by 52 weeks.

[2] Occupation percentages are based on the 2016 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2016 Occupational Employment Survey data applicable to Alameda County updated by the California Employment Development Department to 2017 wage levels.

[3] Including occupations representing 3% or more of the major occupation group

Sources: U.S. Bureau of Labor Statistics, California Employment Development Department, IMPLAN
Keyser Marston Associates, Inc.
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