City of Palo Alto (ID # 11472)

City Council Staff Report

Report Type: Action Items **Meeting Date: 9/21/2020**

Summary Title: Inclusionary Below Market Rate Feasibility Study

Title: Recommendation of the Planning and Transportation Commission (PTC) to: (1) Discuss the Draft Economic Analysis Analyzing Potential Increases to Inclusionary Housing Requirements; (2) Maintain the Inclusionary Housing Requirements at 15 Percent for Ownership Housing and the Housing Impact fee for Rental Housing; and (3) Authorize an Analysis of Specific Adjustments Across the Spectrum of Zoning and Financial Factors that Would Support a 20 Percent Inclusionary Housing Requirement

From: City Manager

Lead Department: Planning and Development Services

Recommendation

Staff and the Planning and Transportation Commission (PTC) recommend that the City Council:

1. Discuss the draft economic analysis analyzing potential increases to inclusionary housing requirements;
2. Maintain the inclusionary housing requirements at 15% for ownership housing units and retain the housing impact fee for rental housing projects; and
3. Direct staff and the PTC to explore possible zoning amendments or other factors that could support a future 20% inclusionary requirement for ownership and rental housing while recognizing that such analysis will be constrained without funding for additional consultant resources.

Executive Summary

This report transmits the Below Market Rate Policy Economic Analysis completed by the City's consultant, Strategic Economics. The consultant's analysis is Attachment A. This staff report serves as a high-level introduction of the study and provides guidance for the Council discussion.

Background

The City Council approved the Housing Work Plan on February 12, 2018.[1] The Housing Work Plan[2] was prepared for City Council in response to a Colleagues Memorandum on November 6, 2017.[3] The Housing Work Plan identifies specific policies and other actions staff should take in order to address the housing needs of Palo Altans. The director of Planning and Development Services presented an update regarding the Housing Work Plan on February 3, 2020.[4]

The Housing Work Plan identifies that the City should: "Explore increasing below-market-rate percentage requirements in market-rate development up to 20% and implementing inclusionary housing requirements for rental housing."[5] These projects were further reinforced in the Colleagues' Memorandum dated September 23, 2019.[6] The action minutes from September 23, 2019[7] reflect Council's unanimous motion to prioritize a feasibility study for the increase of inclusionary Below Market Rate requirements for ownership housing and the feasibility of applying the inclusionary requirement to new rental residential development.

The City hired a consultant, Strategic Economics, to determine the feasibility of development should the City increase inclusionary requirements for ownership and rental housing units. This report transmits the study for Council consideration and staff direction.

Discussion

The BMR Housing Program Analysis (Analysis) studied five different prototypes of residential development that would likely occur in Palo Alto. The prototypes include 3 areas of the City, including El Camino Real, California Avenue, and Downtown Palo Alto. The City's 2030 Comprehensive Plan identifies these as suitable areas for new residential and mixed-used development.

Each of the prototypes were studied with adjustments to five variables:

1) Retail: Reduced required ground-floor retail to 1500 square feet vs. preserving existing retail square footage
2) Parking: Current parking requirements vs. a lower 1 unit, 1 parking space ratio
3) Tenancy: Rental versus ownership
4) Three different inclusionary requirements: 15%, 20%, and 25%
5) If applicable, applying the Housing Incentive Program (HIP) or State Density Bonus

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[1] Council staff report February 12, 2018: https://www.cityofpaloalto.org/civicax/filebank/documents/63393 and Council meeting February 12, 2018 minutes: https://www.cityofpaloalto.org/civicax/filebank/documents/63832

[2] Housing Work Plan: https://www.cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=52278.14&BlobID=70801

[3] Colleagues Memo November 6, 2017: https://www.cityofpaloalto.org/civicax/filebank/documents/61770

[4] Staff Report 2-3-2020: https://www.cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=61922.54&BlobID=74930

[5] Tasks 3.1 and 3.2 in the 2018 Housing Work Plan; Item 2 in the 2020 Housing Work Plan Update.

[6] Colleagues Memo September 23, 2019: https://www.cityofpaloalto.org/civicax/filebank/documents/63832

[7] 9/23/19 minutes: https://www.cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=66804.19&BlobID=73927

Analysis

The Analysis' summary and introduction sections provide a concise summary of the various prototypes that were evaluated, including the variants. This staff report does not unnecessarily repeat the detailed findings.

In summary, the Analysis indicates that most prototypes are unlikely to support an increase in BMR requirements without some adjustments to zoning requirements to decrease the costs of development. The Analysis suggests, and staff support, adjusting parking and ground-floor retail requirements to increase the likelihood that landowners and developers will pursue multi-family housing projects in Palo Alto. The Analysis suggest that adjusting these two variables can increase economic return on investments to levels that make housing development more likely.

It is important to note that the Analysis was conducted prior to the onset of the COVID-19 pandemic and does not account for the severe economic impact of the pandemic. While it is known that millions of California workers have filed for unemployment since mid-March, there is insufficient data to assess the impacts on the real estate markets. Neither Strategic Economics nor other economists can confidently predict the medium-term or long-term outcomes on the economic feasibility of housing development. The need for the affordable housing provided by BMR units is likely to increase, but it is not clear whether construction and land costs will continue to rise and whether the demand for market-rate housing will remain steady.

So, while the uncertainty of the market persists, staff feel confident that adjusting development standards for retail and parking will decrease the costs associated with housing construction. Decreasing the costs may not be enough to overcome the near-, medium-, and long-term impacts of the economic recessionary period we are entering, but it is anticipated these changes will increase the return on investment and thus increase the likelihood that additional housing units will be produced. Once adjustments are made to the development standards, it would be appropriate to revisit the inclusionary requirement, including possible increases to rental housing impact fees.

Planning & Transportation Commission Discussion and Recommendation

The Planning and Transportation Commission (PTC) met on June 10, 2020. The staff report[8] and minutes[9] for that meeting are available online.

The PTC voted 4-3 (Alcheck, Lauing, Summa voting no) to forward the staff recommendation to keep the inclusionary housing requirements at 15% for ownership housing units and retain the

[8] Staff report for June 10, 2020 PTC Meeting: https://www.cityofpaloalto.org/civicax/filebank/documents/77084

[9] Minutes for June 10, 2020 PTC Meeting: https://www.cityofpaloalto.org/civicax/filebank/documents/77547

housing impact fee for rental housing projects. While this recommendation did not achieve the goal of providing more affordable housing through the inclusionary program, this recommendation is consistent with the data provided by the study. With the current development standards, 20% inclusionary housing can be difficult to realize in many areas of Palo Alto, while 15% on-site inclusionary for-sale housing is more likely to be constructed.

The dissenting commissioners expressed disappointment that the recommended action maintained the status quo and did not increase the inclusionary housing requirement. Additionally, some dissenting commissioners expressed a desire to understand more about potential adjustments in development standards that could facilitate an increase in the inclusionary requirement. The study analyzed the impacts of adjusting retail requirements and parking. The current project budget is unable to support analysis of additional development standards.

The PTC also recommended that the Council extend the analysis in order to consider other adjustments that would increase the likelihood that developers will pursue with both ownership and rental projects with a 20% on-site inclusionary rate. By performing additional analyses, the City may ascertain additional development standards that could be adjusted to make it more likely that development will occur. Such standards might include floor area ratio (FAR), residential density, or other standards. However, such extended analysis will be limited to staff and commissioner engagement with community members and will not likely have the benefit of technical consultant analysis as the Planning and Development Services department does not have sufficient consultant funds to support this recommendation.

If the Council were interested in directing staff to make adjustments to the City's parking and retail standards in a manner consistent with the attached Analysis (reduce retail and parking requirements) this can be accomplished with existing City resources and department funds. Adjusting these standards increases the likelihood that development may occur and sustain a 20% inclusionary requirement.

The Council could choose to pursue both options. Additional study can continue while staff bring forward parking and retail standard adjustments.

Regional Housing Needs Allocation

While the study has been underway, the Regional Housing Needs Allocation process has proceeded. Reports from the Housing Methodology Committee indicate that the City of Palo Alto will receive a four to five fold increase over its current 1,988 housing unit. Ultimately, the City will develop a Housing Element that identifies opportunity sites for those housing units, adjusts the zoning for those sites, and adjusts additional development standards to facilitate housing production.

Stakeholder Engagement

The agenda for this item was posted online on the City's website and the Daily Post.

A noticed public hearing of the Planning and Transportation Commission was held on June 10, 2020. The PTC received written correspondence.

Resource Impact

The PTC's recommendation to maintain the current inclusionary housing requirement does not require any funds or staff time to implement. There is no budgetary impact of this recommendation.

If Council directs staff to develop code changes to parking standards and/or ground floor retail requirements, this work can be performed within the Department's current, budgeted resources.

The recommendation to explore zoning code modifications or other factors beyond parking reductions and changes to the retail preservation ordinance to achieve the 20% inclusionary requirement would require consultant services to prepare additional prototype, design and proforma analysis. At present these funds are not available. At Council's direction, staff could engage the PTC and community members in a discussion to explore possible changes to the zoning code, but ultimately progress on this effort would be constrained pending assignment of consultant funds to the Planning and Development Services department to prepare the necessary technical analysis.

Timeline

Should Council support additional study of inclusionary housing requirements, staff may return before the end of FY 2020 with a budget adjustment.

Should Council choose to advance adjustments to parking and/or retail development standards, staff anticipate to bring adjustments to the PTC in early 2021.

Environmental Review

The recommendation in this report does not result in any action that would qualify as a project as defined by the California Environmental Quality Act and therefore is exempt from environmental review.

Attachments:

Attachment A: Below Market Rate Draft Financial Feasibility Report (PDF)

STRATEGICECONOMICS

MEMORANDUM

To: Jonathan Lait and Rachael Tanner, City of Palo Alto

From: Sujata Srivastava and Jesse Brown, Strategic Economics

Date: June 4, 2020

Project: Palo Alto Below Market Rate Housing Program Analysis

Subject: Draft Financial Feasibility Report

I. INTRODUCTION

The City of Palo Alto retained Strategic Economics in 2018 to evaluate the economic feasibility of potential changes to the Below Market Rate (BMR) Housing Program requirements for ownership and rental housing. This report summarizes the financial feasibility of BMR requirements on housing development projects in order to understand the economic viability of changing the City's requirements.

The City of Palo Alto has an existing citywide BMR program that requires residential ownership development projects to provide 15 percent of units on-site for moderate-income households.[1] For rental development projects, the City charges an affordable housing impact fee, set at $20.87 per net residential square foot.[2] This requirement may also be satisfied by providing an equivalent number of on-site affordable units or other alternative compliance options.

Background

Since 2009, when the *Palmer/Sixth Street Properties L.P. v. City of Los Angeles* (*Palmer*) case was decided, the City of Palo Alto has not imposed an inclusionary requirement on rental properties. *Palmer* precluded California cities from requiring long term rent restrictions or inclusionary requirements on rental units. In 2017, Governor Brown signed AB 1505 to restore cities' and counties' ability to require on-site affordable units within rental projects, and the law became effective on January 1, 2018. Under AB 1505, cities can impose inclusionary requirements on rental residential developments provided that: (1) the requirements are imposed in the zoning ordinance; (2) if more than 15 percent of rental units are required to be affordable to low-income households, the State of California Department of Housing and Community Development (HCD) may require that the requirement be justified by an

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[1] Palo Alto Municipal Code 16.65. For residential ownership development of three units or more, the inclusionary housing policy requires 15 percent of units to be targeted to households earning between 80 and 120 percent of the Area Median Income (AMI). Developers can apply for alternative compliance options, such as paying in-lieu fees or providing units off-site if the requirement is deemed financially infeasible. Two-thirds of affordable units must be set aside for households at 80-100% of AMI, and one-third for households at 100-120%. Different requirements apply for residential development sites larger than 5 acres.

[2] Fees as of August 2019.

economic feasibility study under certain circumstances; and (3) alternatives to on-site compliance are allowed.

Purpose

The purpose of this study is to examine the financial feasibility of potential changes to the City's BMR program, including:

- Studying the potential to increase the inclusionary requirements to 20 percent or higher for ownership projects
- Studying the potential to require on-site 15 percent inclusionary BMR units for rental developments, instead of the existing affordable housing in-lieu fee.
- Examining potential land use/zoning strategies to incentivize housing production that results in a higher share of inclusionary BMR units on-site. This includes strategies such as increasing allowable densities/FAR, reducing retail requirements, and reducing parking requirements.

It is important to note that the research and analysis for this study were completed in 2020, before the onset of the COVID-19 pandemic.

Report Organization

The report summarizes the assumptions, methodology, and results of the financial feasibility analysis, and is organized as follows:

- Section II: Summary of Findings
- Section III: Approach and Methodology
- Section V: Pro Forma Analysis and Detailed Results
- Appendix: The appendix to the report provides additional background data that informed the analysis, including housing values, rents, land values, and city fees.

II. SUMMARY OF FINDINGS

This section summarizes the findings of the financial feasibility analysis under different BMR requirements for residential development.

Many residential developments may face feasibility challenges, given the cost of development in Palo Alto and the greater Bay Area. In the last five years, development costs have escalated significantly in Palo Alto, as well as the greater Bay Area. While sales prices and apartment rents are high, they are not rising at the same pace as the cost of construction. These factors have contributed to a slowdown in the development of housing in many cities within the Bay Area.[3]

The analysis indicates that new ownership development projects are not likely to be able to support a 20% inclusionary BMR requirement under the City's current zoning regulations. As shown in Figure 1 below, townhouse and condo developments with a 20% on-site inclusionary requirement do not generate a return on cost that would be likely to attract development (18 percent for ownership projects) with the City's current zoning regulations for parking and ground-floor retail.

FIGURE 1: FEASIBILITY RESULTS OF OWNERSHIP HOUSING PROTOTYPES UNDER CURRENT ZONING REGULATIONS

	Townhouse	Downtown Condo Flats	Condo Flats
Zoning	CS (with HIP)	CD-C (with HIP)	CS (with HIP)
Number of Units	16	26	20
Density (DU/Acre)	32	76	29
Ground-Floor Retail Sq. Ft.	3,000	3,750	9,035
Parking Spaces	47	53	78
Return on Cost			
100% Market-Rate (No BMR Requirement)	20.79%	30.26%	9.95%
Scenario 1 (15% BMR Units On-Site)	8.68%	16.11%	-2.36%
Scenario 2 (20% BMR Units On-Site)	5.08%	11.78%	-6.17%
Scenario 3 (25% BMR Units On-Site)	1.47%	7.45%	-9.98%
Scenario 4 (In-Lieu Fee)	13.87%	22.74%	4.64%

Source: Strategic Economics, 2020.

Highly Likely – Return on Cost is 18% or higher
Somewhat Likely – Return on Cost is over 15%
Less Likely – Net revenues are positive, but ROC is below 15%
Infeasible – Net revenues are negative

For ownership housing prototypes, it would be more likely that development could support a higher inclusionary requirement of 20% if the City provided additional zoning incentives to reduce costs. The analysis indicates that townhouse and condominium development projects are highly likely to feasibly support the existing requirement of 15% and even a higher requirement of 20%, if the City lowered its parking and ground-floor retail requirements. Limiting the required ground-floor retail to 1,500 square

[3] UC Berkeley Terner Center for Housing Innovation https://ternercenter.berkeley.edu/construction-costs-series

feet and reducing the required parking to one space per unit makes it more likely that the ownership prototypes can provide 15% and 20% BMR units.

FIGURE 2: FEASIBILITY RESULTS OF OWNERSHIP HOUSING PROTOTYPES WITH LOWER PARKING AND GROUND-FLOOR RETAIL REQUIREMENTS

	Townhouse	Downtown Condo Flats	Condo Flats
Zoning	CS (with HIP)	CD-C (with HIP)	CS (with HIP)
Number of Units	16	26	20
Density (DU/Acre)	32	76	29
Ground-Floor Retail Sq. Ft.	1,500	1,500	1,500
Parking Spaces	16	26	20
Return on Cost (ROC)			
100% Market-Rate (No BMR Requirement)	35.88%	49.68%	37.96%
Scenario 1 (15% BMR Units On-Site)	22.26%	33.42%	22.52%
Scenario 2 (20% BMR Units On-Site)	18.20%	28.45%	17.74%
Scenario 3 (25% BMR Units On-Site)	14.14%	23.47%	12.96%
Scenario 4 (In-Lieu Fee)	27.19%	39.84%	29.72%

Source: Strategic Economics, 2020.

Highly Likely – Return on Cost is 18% or higher

Somewhat Likely – Return on Cost is over 15%

Less Likely – Net revenues are positive, but ROC is below 15%

Infeasible – Net revenues are negative

Rental development projects in the Downtown are somewhat likely to support a 15% or 20% inclusionary BMR requirement under the City's current zoning regulations. As shown in Figure 3 below, apartments with a 15% or 20% on-site inclusionary requirement in the Downtown CD-C zone can generate a yield on cost of between 4.75 percent and 5.0 percent under current zoning regulations for parking and ground-floor retail. The Downtown CD-C apartment prototype is highly likely to be able to generate impact fee revenues, generating a yield on cost of 5.17 percent.

In the lower density CS zone, rental apartments have a lower likelihood of development, even without the BMR requirement. The CS zone apartment prototype generates a yield on cost of 4.38% without BMR requirements. Therefore, lower density apartments in the CS zone are unlikely to support an on-site inclusionary requirement or to be able to contribute the required housing impact fees per the City's existing BMR policy for rental development.

FIGURE 3: FEASIBILITY RESULTS OF RENTAL HOUSING PROTOTYPES UNDER CURRENT ZONING REGULATIONS

	Downtown Apartments CD-C Zone	Apartments, CS Zone
Zoning	CD-C (with HIP)	CS (with HIP)
Number of Units	54	50
Density (DU/Acre)	157	73
Ground-Floor Retail Sq. Ft.	3,750	9,035
Parking Spaces	63	88
Yield on Cost (YOC)		
Baseline (No Requirement)	5.30%	4.38%
Scenario 1 (15% BMR Units On-Site)	4.88%	4.04%
Scenario 2 (20% BMR Units On-Site)	4.77%	3.95%
Scenario 3 (25% BMR Units On-Site)	4.62%	3.84%
Scenario 4 (In-Lieu /Impact Fee)	5.17%	4.29%

Source: Strategic Economics, 2020.

Highly Likely – Yield on Cost is 5.0% or higher

Somewhat Likely – Yield on Cost is over 4.75%

Not Likely – Net revenues are positive but YOC is below 4.75%

Infeasible – Net revenues are negative

Reductions in the City's requirements for parking and ground-floor retail would lower development costs enough to make it more likely for a rental project to deliver 15% BMR units in the Downtown and CS zones. The analysis shows that limiting the required ground-floor retail to 1,500 square feet and reducing the required parking to one space per unit makes it highly likely that rental development projects in the CS zone can feasibly provide 15% BMR units, achieving a return of over 5.0 percent. Reductions in the parking and retail requirements also enhance the feasibility of downtown apartments in the CD-C zone enough to enable the provision of up to 20% BMR units.

FIGURE 4: FEASIBILITY RESULTS OF RENTAL HOUSING PROTOTYPES WITH LOWER PARKING AND GROUND-FLOOR RETAIL REQUIREMENTS

	Downtown Apartments CD-C Zone	Apartments, CS Zone
Zoning	CD-C (with HIP)	CS (with HIP)
Number of Units	54	51
Density (DU/Acre)	157	74
Ground-Floor Retail Sq. Ft.	1,500	1,500
Parking Spaces	54	51
Yield on Cost (YOC)		
Baseline (No Requirement)	5.62%	5.49%
Scenario 1 (15% BMR Units On-Site)	5.17%	5.07%
Scenario 2 (20% BMR Units On-Site)	5.05%	4.96%
Scenario 3 (25% BMR Units On-Site)	4.90%	4.82%
Scenario 4 (In-Lieu /Impact Fee)	5.47%	5.36%

Source: Strategic Economics, 2020.

Highly Likely – Yield on Cost is 5.0% or higher

Somewhat Likely – Yield on Cost is over 4.75%

Not Likely – Net revenues are positive but YOC is below 4.75%

Infeasible – Net revenues are negative

III. APPROACH AND METHODOLOGY

Strategic Economics worked closely with City staff to develop the approach and methodology for this financial feasibility analysis. The following summarizes the steps undertaken in the analysis, followed by additional information on the assumptions of revenues and costs.

Step 1. Develop Residential Prototypes

The initial step of the analysis was to create a series of residential prototypes. These are intended to represent ownership and rental development that is likely to occur in the City of Palo Alto in the next three to five years. Strategic Economics worked with City Staff to develop assumptions about the zoning, parcel size, density, ground-floor retail, and other factors.

Step 2. Develop Assumptions about BMR Units

Strategic Economics also worked with City staff to determine the percentage of inclusionary units that should be tested and the affordable sales prices and rents. Maximum sales prices and rents were calculated using the method and parameters established by City policy and in coordination with Palo Alto Housing's BMR Program administrator.

Step 3. Collect Key Inputs and Build Pro Forma

The financial feasibility of each prototype is measured using a static pro forma model that calculates profitability. The key inputs in the financial feasibility analysis are the revenues (rents/ sales prices), development costs, and land costs. Strategic Economics collected and summarized data on these inputs using the following data sources:

- **Costar**, a commercial real estate database that tracks rental multifamily properties and property transactions.
- **Interviews** with local developers and brokers.
- **Redfin** and **Polaris Pacific**, real estate firms that collect data on residential sales prices.
- **Review of pro formas** from other projects and clients.

Step 4. Calculate Financial Feasibility

Once all the assumptions and inputs are added, the pro forma model sums up all development costs, including land costs, hard costs (construction costs), soft costs, and financing costs. The pro forma also adds up the project's total value. The project's total value is the sum of the estimated value of the units (i.e. the average per unit sale price for ownership units or the capitalized value of rental units multiplied by the number of units in the project).

The project's profitability, or rate of return, is then calculated by dividing the project's net revenue (i.e. total value minus total development costs), by total development costs. To understand the potential impact of BMR requirements on financial feasibility, the results are compared to developers' typical expectation of return. If the developer's return for a project is within the range of the expected return, the development project is highly likely to be developed. If the return is lower than the market expectation, it is less likely to be built. Projects that achieve negative revenues (costs exceed values) are not financially feasible.

Assumptions

RESIDENTIAL MIXED-USE DEVELOPMENT PROTOTYPES

Strategic Economics collaborated with City staff to develop five (5) distinct residential mixed-use prototypes, summarized in Figure 7, that represent likely development projects in the next 3 to 5 years in Palo Alto. The prototypes include ownership and rental options, to test the feasibility of both types of development.

The prototypes vary based on the following characteristics:

- Ownership and Rental. Three of the prototypes include ownership units (Prototypes 1, 2, and 4) and two are rental developments (Prototypes 3 and 5).
- Zoning Districts: The development prototypes are in three zoning districts that accommodate multi-family residential development: SOFA-II/RT 35, CD-C, and CS. The zoning code governs height, density, and parking requirements.

  In addition, the City's Housing Incentive Program (HIP) was applied in the CD-C and CS zones but not in the SOFA-II zone, where it is not permitted. HIP allows for an increase in floor-area-ratio (FAR) in the CS zone, from 1.0 to 1.5, and in the CD-C zone, from 2.0 to 3.0, among other variances to the code.

  For each prototype, Strategic Economics tested the financial feasibility of the prototype under two conditions: a) existing regulations, and b) more flexible zoning regulations that would lower the amount of parking and ground-floor retail required in the project.

- Ground-floor retail: Each prototype contains some amount of ground-floor retail. The City's Retail Preservation Ordinance requires that new residential projects that replace commercial uses retain the same amount of retail square footage that had previously existed on the site. Prototypes that reflect the City's current regulations (1a, 2a, 3a, 4a, 5a) include the amount of retail that is currently on typical sites in those zoning districts. Prototypes 1b, 2b, 3b, 4b, 5b have reduced ground-floor retail to 1,500 square feet.

- Parking Requirements: Strategic Economics tested each prototype with the City's existing parking requirements, as well as reduced standards, as follows:
  - Currently, the City of Palo Alto requires 1.0 parking spaces per studio, 1.0 spaces per one-bedroom unit, and 2 spaces per unit for two-bedroom units and larger citywide. Retail parking requirements vary by location. The City requires 1.0 space per 250 gross square feet of retail in the downtown district, and 1.0 space per 200 gross square feet in other locations. Prototypes 1a, 2a, 3a, 4a, and 5a are all based on these standards.
  - Strategic Economics tested the feasibility of each prototype with reduced parking assumptions based on a parking requirement of 1.0 parking space per residential unit regardless of size, and zero parking requirements for ground-floor retail. For Prototypes 1b, 2b, 3b, 4b, and 5b, Strategic Economics used these lower parking ratios.

- Unit Mix and Size: Strategic Economics developed assumptions about the mix of units and sizes (studio, one-bedroom, and two-bedrooms) based on recent development patterns in the Silicon Valley region, which favors smaller, compact units. Ownership prototypes have a mix

of one-bedroom and two-bedroom units. One-bedroom units are approximately 1,000 square feet in size, and two-bedroom units range in size from 1,250 to 1,500 square feet. Rental prototypes have a mix of studio and one-bedroom units. Studios are 500 square feet in size, and one-bedrooms are 750 to 800 square feet.

The following summarizes the development prototypes under existing regulations and under more flexible regulations. Figure 7 provides more detail.

1. **Townhouse ownership units, SOFA-II, RT 35 Zone**: A 3-story building on a half-acre site in the SOFA-II zoning district, with 16 ownership townhouse units over a podium parking structure.
    a) Prototype 1a includes 3,000 square feet of ground-floor retail and 47parking spaces, all in a podium structure.
    b) Prototype 2b has a similar density, but the amount of ground-floor retail is reduced to 1,500 square feet, and the parking is reduced to 16 spaces (one per unit) in a podium structure.

2. **Downtown condominium ownership units, CD-C Zone with HIP:** A three to four-story building with 26 ownership condominium flats on a 1/3-acre site in Downtown Palo Alto. The density is 76 units per acre.
    a) Prototype 2a has 3,750 square feet of retail and 53 underground parking spaces.
    b) Prototype 2b has 1,500 square feet of retail and 26 underground parking spaces.

3. **Downtown rental apartments, CD-C Zone with HIP:** A three to four-story rental apartment building with 54 units on a 1/3-acre site in Downtown Palo Alto. The density is 157 units per acre.
    a) Prototype 3a has 3,750 square feet of retail, and 63 underground parking spaces
    b) Prototype 3b has 1,500 square feet of retail and 54 underground parking spaces.

4. **Condominiums ownership units, CS Zone with HIP:** A three to four-story building with 20 ownership condominium flats on a 2/3-acre site on a commercial corridor in the CS zone. The density is 29 units per acre.
    a) Prototype 4a has 9,035 square feet of retail and 78 parking spaces in a mix of surface and underground parking.
    b) Prototype 4b has 1,500 square feet of retail and 20 parking spaces, all in a podium garage.

5. **Rental apartments, CS Zone with HIP:** A three to four-story building with 50 to 51 rental apartments on a 2/3-acre site in the CS zone. The density is around 73 units per acre.
    a) Prototype 5a has 50 units, 9,035 square feet of retail, and 88 parking spaces (surface and underground).
    b) Prototype 5b has 51 units, 1,500 square feet of retail, and 51 parking spaces (podium and surface).

FIGURE 5: OVERVIEW OF DEVELOPMENT PROTOTYPES

	Prototype 1a	Prototype 1b	Prototype 2a	Prototype 2b	Prototype 3a	Prototype 3b	Prototype 4a	Prototype 4b	Prototype 5a	Prototype 5b
	Townhouse, Retail, Fully Parked	Townhouse, Reduced Retail, Reduced Parking	Downtown Condo Flats, Retail, Fully Parked	Downtown Condo Flats, Reduced Retail, Reduced Parking	Downtown Apartments, Retail, Fully Parked	Downtown Apartments, Reduced Retail, Reduced Parking	Condo Flats, Retail, Fully Parked	Condo Flats, Reduced Retail, Reduced Parking	Apartments, Retail, Fully Parked	Apartments, Reduced Retail, Reduced Parking
Overview										
Zoning Designation	SOFA-II, RT 35	SOFA-II, RT 35	CD-C (with HIP)	CD-C (with HIP)	CD-C (with HIP)	CD-C (with HIP)	CS (with HIP)	CS (with HIP)	CS (with HIP)	CS (with HIP)
Stories	3	3	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
Parcel Size (acres)	0.50	0.50	0.34	0.34	0.34	0.34	0.68	0.68	0.68	0.68
Total Floor Area Ratio (FAR)	1.14	1.07	3.00	2.85	2.99	3.00	1.49	1.23	1.50	1.27
Residential Program										
Studio	0	0	0	0	33	33	0	0	36	36
1-BD	0	0	8	8	21	21	0	0	14	15
2-BD	0	0	18	18	0	0	20	20	0	0
2-BD Townhome	16	16	0	0	0	0	0	0	0	0
Total Units	**16**	**16**	**26**	**26**	**54**	**54**	**20**	**20**	**50**	**51**
Dwelling Units Per Acre	32	32	76	76	157	157	29	29	73	74
Weighted Average Unit Size (sf)	1,250	1,250	1,346	1,346	647	647	1,500	1,500	606	609
Ground-Floor Retail (sf)	3,000	1,500	3,750	1,500	3,750	1,500	9,035	1,500	9,035	1,500
Total Required Parking Spaces	47	16	53	26	63	54	78	20	88	51
Parking Type Mix										
Surface Spaces	0%	0%	0%	0%	0%	0%	22%	0%	19%	33%
Underground Spaces	0%	0%	100%	100%	100%	100%	78%	0%	81%	0%
Podium Spaces	100%	100%	0%	0%	0%	0%	0%	100%	0%	67%

Source: Strategic Economics, 2020.

BMR HOUSING PROGRAM ASSUMPTIONS

Strategic Economics tested each prototype under the existing BMR policy for ownership and rental projects, and under scenarios that represent potential changes to the requirements.

For residential ownership development the City's current inclusionary housing policy applies to projects with three or more units and requires 15 percent of units be affordable to households with an income at or below 120 percent AMI. Two-thirds of affordable units must be set aside for households at 80 percent to 100 percent of AMI, and one-third for households at 100 percent to 120 percent.

Developers of large sites of over five acres can apply for alternative compliance options, such as paying in-lieu fees or providing units off-site if the requirement is deemed financially infeasible. The analysis excluded sites of this size.

For residential rental development, an affordable housing impact fee payment is required, currently set at $20.87 per net residential square foot. This requirement may also be satisfied by providing a number of on-site affordable units that equals or exceeds the fee amount. Figure 8 and Figure 9 describe the assumed BMR income limits and target pricing of units used in the analysis.

FIGURE 6: OWNERSHIP BMR INCOME LIMITS AND PRICING BMR UNITS, BASED ON CURRENT POLICY

		100% AMI		120% AMI	
Unit	Household Size	Household Income	Approx. BMR Sale Price	Household Income	Approx. BMR Sale Price
Studio	1 Person	$92,000	$294,533	$101,200	$407,438
1BR	2 Persons	$105,100	$351,274	$115,610	$480,255
2BR	3 Persons	$118,250	$408,232	$130,075	$553,351

Source: City of Palo Alto, 2019; Strategic Economics, 2020.

FIGURE 7: RENTAL BMR INCOME LIMITS AND PRICING BMR UNITS, BASED ON CURRENT POLICY

Unit	60% AMI	80% AMI	100% AMI
Studio	$1,391	$1,779	$2,260
1-BD	$1,476	$1,892	$2,407
2-BD	$1,761	$2,261	$2,878

Source: HCD, 2019; HUD, 2019; Strategic Economics, 2020.

Ownership Development

Using the BMR price per unit assumptions, Strategic Economics tested the economic feasibility of the development of ownership housing under five different policy scenarios for the BMR requirements:

- **Scenario 0** (No Requirements): This scenario assumes that the project is 100 percent market-rate, with no affordable units and no in-lieu fees required.
- **Scenario 1** (Existing BMR Policy of 15% On-Site Inclusionary): This scenario mirrors the City's existing inclusionary housing requirement for ownership projects. The development projects must provide at least 15 percent BMR units, with 10% targeting households earning 100% AMI and 5% targeting households at 120% percent AMI.
- **Scenario 2** (20% On-Site Inclusionary): This scenario requires new ownership projects to include at least 20% BMR units, targeting households earning between 80 and 120% AMI.
- **Scenario 3** (25% On-Site Inclusionary): This scenario requires new ownership projects to include at least 25 percent BMR units, targeting households earning between 80 and 120% AMI.
- **Scenario 4** (In-Lieu Fees): This scenario assumes that the development is required to pay the existing in-lieu fees of $52.18 per net residential square foot for attached ownership housing (condos and single-family attached/townhomes) instead of providing affordable units on-site.

These scenarios are summarized in Figure 10.

FIGURE 8: OWNERSHIP DEVELOPMENT INCLUSIONARY HOUSING SCENARIOS TESTED

	Scenario 0: No Requirements	Scenario 1: 15% On-Site (a)	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
60% AMI	0%	0%	0%	0%	0%
80% AMI	0%	0%	0%	0%	0%
100% AMI	0%	10%	10%	10%	0%
120% AMI	0%	5%	10%	15%	0%
Market Rate	100%	85%	80%	75%	100%
In-Lieu Fee Payment	No	No	No	No	Yes

(a) Scenario 1 models the City of Palo Alto's existing inclusionary policy, which applies to ownership development.
Source: City of Palo Alto, 2019; Strategic Economics, 2020.

Rental Development

While rental development in the City of Palo Alto is currently only subject to an affordable housing impact fee, Strategic Economics also tested the economic feasibility of the development of rental housing under five different inclusionary scenarios:

- **Scenario 0** (No Requirements): This scenario assumes that the project is 100 percent market-rate, with no affordable units and no in-lieu fees required.
- **Scenario 1** (15% On-Site Inclusionary): This scenario requires new projects to include at least 15 percent of the units at levels affordable to low and moderate-income households. Five percent is affordable to households earning 60 percent AMI; five percent is affordable to households earning 80 percent AMI; and five percent is affordable to households earning 100 percent AMI.

- **Scenario 2** (20% On-Site Inclusionary): This scenario requires new projects to include at least 20 percent BMR units, targeting low and moderate-income households. Five percent is affordable to households earning 60 percent AMI; five percent is affordable to households earning 80 percent AMI; and 10 percent is affordable to households earning 100 percent AMI.
- **Scenario 3** (25% On-Site Inclusionary): This scenario has a higher inclusionary requirement of 25 percent and targets low and moderate-income households. Five percent is affordable to households earning 60 percent AMI; 10 percent is affordable to households earning 80 percent AMI; and 10 percent is affordable to households earning 100 percent AMI.
- **Scenario 4** (Impact Fees): This scenario assumes that the development is required to pay the existing housing impact fees of $20.87 per net residential square foot for rental apartments, instead of providing affordable units on-site.

These scenarios are summarized in Figure 11 below.

FIGURE 9: RENTAL DEVELOPMENT INCLUSIONARY HOUSING SCENARIOS TESTED

	Scenario 0: No Requirements	Scenario 1: 15% On-Site (a)	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee (b)
60% AMI	0%	5%	5%	5%	0%
80% AMI	0%	5%	5%	10%	0%
100% AMI	0%	5%	10%	10%	0%
120% AMI	0%	0%	0%	0%	0%
Market Rate	100%	85%	80%	75%	100%
Impact Fee Payment	No	No	No	No	Yes

(a) The City of Palo Alto's existing inclusionary housing policy only applies to ownership residential development. Rental development is currently subject to an affordable housing impact fee.
(b) Scenario 4 essentially models the City of Palo Alto's existing policy of imposing an affordable housing impact fee on rental development of $20.87/sf.
Source: City of Palo Alto, 2019; Strategic Economics, 2020.

Financial Feasibility Methodology

This section describes the method used to measure financial feasibility and the major cost and revenue assumptions underlying the analysis.

MEASURING FINANCIAL FEASIBILITY

The financial feasibility of each prototype is measured using a static pro forma model that solves for the profit to the developer. However, it is important to note that individual development projects may be less or more profitable than these prototypes, depending on the specifics of the development program, development costs (construction and land), sources of financing, and other factors. Furthermore, because it is a static model reflecting market conditions as of June 2019, the pro forma analysis does not factor future changes in prices/rents, construction costs, or financing.

For the purposes of measuring financial feasibility in this analysis, developer profit was measured by using one of two metrics:

- **Return on cost (ROC) for ownership housing.** ROC is a common measure of project profitability for residential ownership development. The pro forma model tallies all development costs, including

land costs, hard costs (construction costs), soft costs, and financing costs. The pro forma also adds up the project's total value. The project's total value is the sum of (1) the estimated value of the condominiums (i.e. the average per unit sale price multiplied by the number of units), and (2) if applicable, the capitalized value of retail. The project's ROC is then calculated by dividing the project's net revenue (i.e. total value minus total development costs), by total development costs.

- **Yield on cost (YOC) for rental housing.** YOC is a common measure of profitability for income-generating projects, such as residential rental development. The pro forma model tallies all development costs (land costs, hard costs, soft costs, and financing costs). The pro forma also estimates total revenues: the project's net annual operating income is the stabilized income from the property (i.e. rental income generated from both the residential and retail uses), minus operating expenses and an allowance for vacancy. The YOC is estimated by dividing the total annual net operating income by total development costs.

RETURN THRESHOLDS

To understand the potential impact of inclusionary requirements on financial feasibility, the ROC and YOC results for each prototype and inclusionary housing scenario are compared to developers' typical expectation of return. These return expectations are summarized in Figure 12 and discussed below:

- **For ownership prototypes, the target ROC threshold is] 18 percent,** based on developer interviews and recent pro forma models for new projects in Northern Santa Clara County. Ownership projects that meet or exceed an 18 percent return are highly likely to be developed. Projects that achieve a return of between 15 and 18 percent are somewhat likely to be built, because they fall slightly short of the target return. Projects with a return of under 15 percent are less likely to be developed. Finally, projects that have negative net revenues (costs exceed values) are infeasible.
- **For rental prototypes, the target YOC threshold is 5.0 percent**. According to the developers interviewed for this study, and a review of recent development project pro formas, the minimum YOC for a new multi-family development project should usually be 1.0 to 1.5 points higher than the published capitalization rate (cap rate).

  The current cap rate for multifamily properties in the San José Metropolitan Area is between 4.00 to 4.25%.[4] The cap rate, measured by dividing the net operating income generated by a property by the total project value, is a commonly used metric to estimate the value of an asset. Cap rates rise and fall along with interest rates. In a climate of rising interest rates, it is important to set the expectations of YOC at a conservative level, to allow for a margin between the cap rate and the rate of return. It is also important to consider that investors consider a wide range of factors to determine if a development project makes financial sense, and some investors may have different levels of risk tolerance than others.

  Rental projects that meet or exceed a yield on cost of over 5.0 percent are highly likely to be developed. Projects that achieve a return of between 4.75 and 5.0 percent are somewhat likely to be built. Projects with a return of under 4.75 percent are not likely to be developed. Finally, projects that have negative net revenues (costs exceed values) are infeasible.

[4] CBRE Investor's Cap Rate Survey (H1, 2019).

FIGURE 10: DEVELOPER RETURN ASSUMPTIONS

	Ownership Prototypes	Rental Prototypes
Developer Interviews	18-20% (ROC)	5.0-6.0% (YOC)
Cap Rate Survey	N/A	4.0-4.25%
Target Return Used in Analysis	18% (ROC)	5.00% (YOC)

Source: Developer interviews and project pro formas, 2018 and 2019; CBRE Cap Rate Survey, 2019; Strategic Economics, 2020.

REVENUE ASSUMPTIONS

MARKET RATE RESIDENTIAL

There is significant pent-up housing demand in Santa Clara County and the broader Bay Area region, as housing development has not kept up with employment and regional population growth. Between 2010 and 2015, Santa Clara County added over 170,000 new jobs, but only 29,000 new housing units.[5] Apartment rents accelerated beginning in 2011, as the economy emerged from the Great Recession, and continued growing at an average annual rate of nearly eight percent until 2015. Since then rents have continued to grow at a slower pace of about four percent.

Sales prices in Palo Alto and Santa Clara County have been escalating at a rapid rate over the last five years. In Palo Alto, the median sales price for a single-family home increased from $2.4 million in 2014 to $3.2 million in 2018.[6] Similarly, the median sales price for a condominium climbed from $1.25 million in 2014 to $1.7 million in 2018.[7]

The market-rate sale prices and rents assumed for each prototype are summarized in Figure 13. The values are calculated as a weighted average to reflect that different types of units have different unit values. Sales prices for condominium projects were based on recent sales and re-sales in Palo Alto as reported by Redfin and Polaris Pacific. The Appendix to this report (Figure A-1) includes detailed information on the comparable projects used to inform these estimates.

Because of the limited number of recently built apartment projects in Palo Alto, the rental rate estimates for apartment units were based in part on developer interviews, a review of rents at existing apartment projects in Palo Alto, as well as comparable newly built apartment projects in Los Altos and Mountain View, as reported by Costar. Figure A-2 in the Appendix includes detailed information on the comparable projects used to inform these estimates.

[5] SPUR, "Room for More: Housing Agenda for San José," August 2017.
[6] Santa Clara County Association of Realtors, 2014 and 2018. https://www.sccaor.com/pdf/stats/2014.pdf https://www.sccaor.com/pdf/stats/2018.pdf.
[7] Ibid

FIGURE 11: MARKET-RATE RESIDENTIAL SALES PRICES AND RENTS, BY PROTOTYPE

	Unit Size	Sale Price/ Monthly Rent Per Sq. Ft.	Sale Price/ Monthly Rent Per Unit
OWNERSHIP			
Townhouse, SOFA-II			
2-BD Townhouse	1,250	$1,100	$1,375,000
Downtown Condos, CD-C			
1-BD Flat	1,000	$1,100	$1,100,000
2-BD Flat	1,500	$1,200	$1,800,000
Condos, CS			
2-BD Flat	1,500	$1,200	$1,800,000
RENTAL			
Downtown Apartments, CD-C			
Studio Flat	550	$6.50	$3,575
1-BD Flat	800	$5.75	$4,600
Apartments, CS			
Studio Flat	550	$6.50	$3,575
1-BD Flat	750	$5.75	$4,313

Source: Strategic Economics 2020.

The value of market-rate units is summarized in Figure 14 for ownership units, and in Figure 15 for rental units. For the ownership prototypes, the total project value is obtained by multiplying the per unit sale price by the total number of units. For the rental prototypes, an income capitalization approach is used. This approach first estimates the annual net operating income (NOI) of the prototype, which is the difference between project income (annual rents) and project expenses (operating costs and vacancies). The NOI is then divided by the current cap rate to derive total project value.[8]

[8] As mentioned above, the CBRE Investor's Cap Rate Survey estimates the cap rate for infill multifamily Class A in San José Metro Area to range from 4.0 to 4.25%.

FIGURE 12: OWNERSHIP MARKET-RATE HOME VALUE

	Prototype 1a/1b Townhouse SOFA II-RT 35	Prototype 2a/2b Downtown Condo C-DC	Prototype 4a/4b Condo Flats CS
Sales Value (per unit)	$1,375,000	$1,584,615	$1,800,000
Total Units	16	26	20
Total Residential Value	$22,000,000	$41,200,000	$36,000,000

Source: Redfin, 2019; Polaris Pacific, 2019; Strategic Economics, 2020.

FIGURE 13: RENTAL MARKET RATE RESIDENTIAL VALUE CALCULATION BY PROTOTYPE

	Prototype 3a/3b Downtown Apartments CD-C	Prototype 5a Apartments CS	Prototype 5b Apartments CS
Monthly Rent (per unit)	$3,973.61	$3,781.50	$3,791.91
Annual Rent (per unit)	$47,683.33	$45,378.00	$45,502.94
Vacancy Allowance	5.0%	5.0%	5.0%
Operating Expenses (% of gross revenue)	30.0%	30.0%	30.0%
Annual Net Operating Income (per nsf)	$30,994.17	$29,495.70	$29,576.91
Capitalization Rate (a)	4.25%	4.25%	4.25%
Capitalized Value (per unit)	$729,275	$694,016	$695,927
Total Units	54	50	51
Total Residential Value	$39,380,824	$34,700,824	$35,492,294

[1] Based on the CBRE H1 2019 Cap Rate Survey. Cap rates for the San José Metropolitan Area were between 4.00% and 4.25% for infill multifamily Class A.
Source: CBRE, 2019; CoStar, 2019; Strategic Economics, 2020.

BELOW MARKET RESIDENTIAL

BMR residential values at different AMI levels are summarized in Figure 16 for ownership units and Figure 17 for rental units. Maximum sales prices and rents for the BMR units were provided by Palo Alto Housing, the City's BMR program administrator. Maximum rents were calculated by Strategic Economics based on the 2019 income limits for Santa Clara County, as provided by the State of California Department of Housing and Community Development (HCD). An income capitalization approach is also applied to BMR units to derive total residential value.

FIGURE 14: WEIGHTED AVERAGE PER UNIT SALES PRICES FOR BMR UNITS

	Prototype 1a/1b Townhouse SOFA II-RT 35	Prototype 2a/2b Downtown Condo C-DC	Prototype 4a/4b Condo Flats CS
100% AMI	$408,232	$390,706	$408,232
120% AMI	$553,351	$530,860	$553,351

Note: All values are weighted averages, according to each prototype's unit mix. Affordable sale prices were provided by the City of Palo Alto and Palo Alto Housing, 2019.
Source: City of Palo Alto, 2019; Palo Alto Housing, 2019; Strategic Economics, 2020.

FIGURE 15: WEIGHTED AVERAGE RENT PRICES FOR BMR UNITS

	Prototype 3a/3b Downtown Apartments CD-C	Prototype 5a Apartments CS	Prototype 5b Apartments CS
60% AMI	$1,424	$1,415	$1,416
80% AMI	$1,823	$1,810	$1,812
100% AMI	$2,317	$2,301	$2,303
120% AMI	$2,790	$2,770	$2,773

Note: All values are weighted averages, according to each prototype's unit mix. Affordable rents were calculated by Strategic Economics based on the 2019 Santa Clara County income and rent limits, published by HCD, and the 2019 Santa Clara County maximum utility allowance, published by HUD.
Source: Costar, 2019; HCD, 2019; Strategic Economics, 2020.

RETAIL COMMERCIAL

For mixed-use projects, the ground-floor retail spaces are usually not factored into the developer's pro forma. This is because the amount of retail included is fairly modest and tenanting the spaces can be challenging. For the purposes of this analysis, retail revenues and the retail capitalized value was assumed to not contribute to the total sale or capitalized value of the prototypes.

DEVELOPMENT COST ASSUMPTIONS

The development costs incorporated into the pro forma analysis include land costs, hard costs (construction materials and labor), soft costs, and financing costs. Cost assumptions are summarized in Figure 12 and described below.

LAND COSTS

A critical factor for development feasibility is the cost of land. To determine the market value of sites zoned for residential use in Palo Alto, Strategic Economics interviewed developers and reviewed recent pro formas for similar development projects in Palo Alto, Los Altos, and Mountain View. Land value estimates ranged from approximately $10 million to $15 million per acre. Assuming land values were highest in the downtown, this analysis used the upper end of estimates for the downtown site in the CD-C zoning district, valuing land at $15 million per acre ($344 per square foot). For other prototypes in the SOFA-II and CS zoning districts, Strategic Economics estimated the value of land based on recent transactions in Palo Alto and neighboring communities, which was approximately $12 million ($275 per square foot).

Note that these values are approximations for the purposes of the feasibility analysis; in reality, the value of any particular site is likely to vary based on its location, amenities, and property owner expectations.

HARD COSTS

Hard costs are based on Strategic Economics' review of pro formas for similar development projects, as well as interviews with developers active in Palo Alto and surrounding cities. The assumptions for hard costs, shown in Figure 12, include estimates for basic site improvements and construction costs for residential areas, retail areas, and parking structures. For underground parking, Strategic Economics estimated a higher cost for Downtown sites, which tend to be more physically constrained and require more excavation, than for sites in the SOFA-II and CS zones.

It should be noted that construction costs have been escalating rapidly in the Bay Area in the last several years;[9] project feasibility is highly sensitive to changes in construction cost assumptions.

SOFT COSTS AND FINANCING COSTS

Soft costs include items such as architectural fees, engineering fees, insurance, taxes, legal fees, accounting fees, marketing costs, developer overhead, and city fees, as shown in Figure 12. City fees and other development impact fees were calculated for the individual prototypes based on data provided by City staff and recently published fee rates from various city departments and public agencies. Detailed fee calculations broken down to cost per unit are included in the Appendix (see Figure A-4). Other soft costs were estimated based on standard industry ratios, calculated as a percentage of hard costs.

[9] Terner Center for Housing Innovation, UC Berkeley. Understanding the Drivers of Rising Construction Costs in California (Ongoing Research), https://ternercenter.berkeley.edu/construction-costs.

FIGURE 16: DEVELOPMENT COST ASSUMPTIONS

	Metric	Estimate
Land Costs		
Downtown site	per acre	$15,000,000
All other sites	per acre	$12,000,000
Hard Costs		
Site Demolition and Prep	per site sf	$25
Residential Building Area		
Townhomes (Type V)	per gross sf	$270
Stacked Condominiums, Type V	per gross sf	$320
Stacked Apartments, Type V	per gross sf	$300
Retail Building Area (a)	per gross sf	$175
Surface Parking	per space	$10,000
Podium Parking	per space	$40,000
Underground Parking (SOFA-II and CS sites)	per space	$70,000
Underground Parking (Downtown sites)	per space	$100,000
Soft Costs		
City Permits/Fees (b)		
Townhouse, SOFA II-RT 35 Prototype 1a	per unit	$53,232
Townhouse, SOFA II-RT 35 Prototype 1b	per unit	$47,572
Downtown Condo, CD-C Prototype 2a	per unit	$52,398
Downtown Condo, CD-C Prototype 2b	per unit	$47,464
Condo Flats, CS Prototype 3a	per unit	$38,887
Condo Flats, CS Prototype 3b	per unit	$36,844
Downtown Apartments, CD-C Prototype 4a	per unit	$65,570
Downtown Apartments, CDC Prototype 4b	per unit	$50,545
Apartments, CS Prototype 5a	per unit	$41,973
Apartments, CS Prototype 5b	per unit	$35,964
Affordable Housing In-Lieu/Impact Fee (c)		
Townhomes/Single-Family Attached	per net sf	$52.18
Condominiums	per net sf	$52.18
Apartments	per net sf	$20.87
Other Soft Costs		
Architectural, Engineering, Consulting	% of hard costs	6%
Taxes, Insurance, Legal, Accounting	% of hard costs	3%
Other and Marketing	% of hard costs	3%
Contingency	% of hard costs	5%
Developer Overhead and Fees	% of hard costs	4%
Total Other Soft Costs	% of hard costs	21%
Financing Costs		
Financing Costs	% of hard + soft costs	6.00%

(a) Includes a tenant improvement allowance.
(b) Includes fees paid on the ground floor retail component of the prototypes. Detailed information on how city fees were estimated is provided in Figure A-4.
(c) The additional affordable housing in-lieu/impact fees are only included in total development costs when testing Scenario 4 (see Figure 13 – 16)
Sources: Costar, 2019; Developer interviews, 2018; City of Palo Alto, 2019; Palo Alto Unified School District, 2019; Strategic Economics, 2020.

IV. FEASIBILITY ANALYSIS RESULTS BY PROTOTYPE

This section shows the detailed results of the financial feasibility analysis under different inclusionary housing scenarios for each prototype. Figures 17 through 21 show the results for each prototype. The complete pro formas for each prototype are presented in Figures 22-31. Figure 32 and Figure 33 summarize the results for ownership and rental prototypes, respectively.

Currently, a mixed-use townhouse development project in the SOFA-II district is more likely to support an increased inclusionary requirement of 20% BMR units if there were reductions in the retail and parking requirements. As shown in Figure 17, the current retail replacement and parking policies make it less likely for a townhouse project to feasibly contribute 20% BMR units. With the current retail and parking requirements, the townhouse project is well below the target return of 18%. However, with reduced retail of 1,500 square feet and a lower parking ratio of one space per unit, the townhouse prototype in the SOFA-II district is more likely to be able to provide up to 20% BMR units on-site.

FIGURE 17: SUMMARY RESULTS FOR TOWNHOUSE, SOFA-II, RT-35 (PROTOTYPE 1A/1B)

	Prototype 1a Townhouse, Retail, Fully Parked	**Prototype 1b** Townhouse, Reduced Retail, Reduced Parking
Density (DU/Acre)	32	32
Floor-Area-Ratio (FAR)	1.14	1.07
Return on Cost		
Baseline (No Requirement)	20.79%	35.88%
Scenario 1 (15% On-Site)	8.68%	22.26%
Scenario 2 (20% On-Site)	5.08%	18.20%
Scenario 3 (25% On-Site)	1.47%	14.14%
Scenario 4 (In-Lieu Fee)	13.87%	27.19%

Source: Strategic Economics, 2020.

Highly Likely – Return on Cost is 18% or higher
Somewhat Likely – Return on Cost is over 15%
Less Likely – Net revenues are positive, but ROC is below 15%
Infeasible – Net revenues are negative

A mixed-use condominium prototype in the Downtown CD-C zoning district (Prototype 2) under current zoning regulations is highly likely to support the payment of housing in-lieu fees and somewhat likely to support 15% BMR units on-site, but less likely to be able to provide 20% BMR units on-site. As shown in Figure 18, Prototype 2 does not achieve the target return on cost with BMR inclusionary units, but it is somewhat likely to be able to provide 15% BMR units on-site and it is highly likely to be able to contribute housing in-lieu fees. However, a downtown condominium project is highly likely to provide up to 25% BMR units on-site if the City's requirements for parking and retail were lowered, because of the cost savings associated with building fewer underground parking spaces and retail space.

FIGURE 18: SUMMARY RESULTS FOR CONDOMINIUMS, CD-C WITH HIP (PROTOTYPE 2A/2B)

	Prototype 2a Downtown Condo Flats, Retail, Fully Parked	Prototype 2b Downtown Condo Flats, Reduced Retail, Reduced Parking
Density (DU/Acre)	76	76
Floor-Area-Ratio (FAR)	3.00	2.85
Return on Cost		
Baseline (No Requirement)	30.26%	49.68%
Scenario 1 (15% On-Site)	16.11%	33.42%
Scenario 2 (20% On-Site)	11.78%	28.45%
Scenario 3 (25% On-Site)	7.45%	23.47%
Scenario 4 (In-Lieu Fee)	22.74%	39.84%

Source: Strategic Economics, 2020.

Highly Likely – Return on Cost is 18% or higher
Somewhat Likely – Return on Cost is over 15%
Less Likely – Net revenues are positive, but ROC is below 15%
Infeasible – Net revenues are negative

The downtown rental apartment prototype (Prototype 3) is somewhat likely to be able to provide 20% inclusionary BMR units with the City's existing requirements for parking and replacement retail. Because the prototype has a high density of 157 units per acre, it get closer to achieving sufficient revenues to offset the cost of providing the required ground-floor retail and parking in an underground garage. If the retail and parking requirements were reduced for this prototype, it is more likely to provide 20 percentage inclusionary BMR units.

FIGURE 19: SUMMARY RESULTS FOR APARTMENTS, CD-C WITH HIP (PROTOTYPE 3A/3B)

	Prototype 3a Downtown Apartments, Retail, Fully Parked	Prototype 3b Downtown Apartments, Reduced Retail, Reduced Parking
Density (DU/Acre)	157	157
Floor-Area-Ratio (FAR)	2.99	3.00
Return on Cost		
Baseline (No Requirement)	5.30%	5.62%
Scenario 1 (15% On-Site)	4.88%	5.17%
Scenario 2 (20% On-Site)	4.77%	5.05%
Scenario 3 (25% On-Site)	4.62%	4.90%
Scenario 4 (In-Lieu Fee)	5.17%	5.47%

Source: Strategic Economics, 2020.

Highly Likely – Yield on Cost is 5.0% or higher
Somewhat Likely – Yield on Cost is over 4.75%
Not Likely – Net revenues are positive but YOC is below 4.75%
Infeasible – Net revenues are negative

The condominium flats in the CS zone (Prototype 4) are not likely to be built with inclusionary on-site units, in part because of the retail required to be replaced. Most sites in the CS zone have a significant amount

of retail, and this prototype assumes that the retail preservation ordinance would require the construction of over 9,000 square feet of retail. This requirement, along with the high parking ratio, creates a significant cost to developers. Reducing the retail requirement to 1,500 square feet and the parking ratio to just one space per unit allows condominium projects in the CS zone to be much more likely to provide inclusionary BMR units.

FIGURE 20: SUMMARY RESULTS FOR CONDOMINIUMS, CS WITH HIP (PROTOTYPE 4A/4B)

	Prototype 4a Condo Flats, Retail, Fully Parked	Prototype 4b Condo Flats, Reduced Retail, Reduced Parking
Density (DU/Acre)	29	29
Floor-Area-Ratio (FAR)	1.49	1.23
Return on Cost		
Baseline (No Requirement)	9.95%	37.96%
Scenario 1 (15% On-Site)	-2.36%	22.52%
Scenario 2 (20% On-Site)	-6.17%	17.74%
Scenario 3 (25% On-Site)	-9.98%	12.96%
Scenario 4 (In-Lieu Fee)	4.64%	29.72%

Source: Strategic Economics, 2020.

Highly Likely – Return on Cost is 18% or higher
Somewhat Likely – Return on Cost is over 15%
Not Likely – Net revenues are positive, but ROC is below 15%
Infeasible – Net revenues are negative

The lower density rental apartment prototype in the CS zone (Prototype 5) is not likely to be built under current zoning regulations, or to contribute BMR units. Without any BMR requirements, the lower density rental prototype achieves a yield on cost of 4.3%, below the target of 5.0%, as shown in Figure 21. This lower density rental prototype is also burdened by the requirement to provide 9,000 square feet of ground-floor retail, in addition to the cost of parking. However, an apartment project in the CS zone is more likely to provide close to 15% on-site BMR units if it could reduce the amount of parking to one space per unit, and the ground-floor retail space to 1,500 square feet.

FIGURE 21: SUMMARY RESULTS FOR APARTMENTS, CS WITH HIP (PROTOTYPE 5A/5B)

	Prototype 5a Apartments, Retail, Fully Parked	**Prototype 5b** Apartments, Reduced Retail, Reduced Parking
Density (DU/Acre)	73	74
Floor-Area-Ratio (FAR)	1.50	1.27
Return on Cost		
Baseline (No Requirement)	4.38%	5.49%
Scenario 1 (15% On-Site)	4.04%	5.07%
Scenario 2 (20% On-Site)	3.95%	4.96%
Scenario 3 (25% On-Site)	3.84%	4.82%
Scenario 4 (In-Lieu Fee)	4.29%	5.36%

Source: Strategic Economics, 2020.

Highly Likely – Yield on Cost is 5.0% or higher
Somewhat Likely – Yield on Cost is over 4.75%
Not Likely – Net revenues are positive but YOC is below 4.75%
Infeasible – Net revenues are negative

FIGURE 22: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 1A (TOWNHOUSE, SOFA-II RT 35)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Capitalized Value	$22,000,000	$19,795,852	$19,138,533	$18,481,214	$22,000,000
Retail Capitalized Value	$0	$0	$0	$0	$0
Total Capitalized Value	*$22,000,000*	*$19,795,852*	*$19,138,533*	*$18,481,214*	*$22,000,000*
per unit	*$1,375,000*	*$1,237,241*	*$1,196,158*	*$1,155,076*	*$1,375,000*
Development Costs					
Land Costs					
Total Land Cost	*$6,000,000*	*$6,000,000*	*$6,000,000*	*$6,000,000*	*$6,000,000*
per unit	$375,000	$375,000	$375,000	$375,000	$375,000
Hard Costs					
Site Prep	$544,500	$544,500	$544,500	$544,500	$544,500
Residential Building Area	$5,869,565	$5,869,565	$5,869,565	$5,869,565	$5,869,565
Retail Building Area (Including TIs)	$525,000	$525,000	$525,000	$525,000	$525,000
Parking	$1,880,000	$1,880,000	$1,880,000	$1,880,000	$1,880,000
Subtotal Hard Costs	*$8,819,065*	*$8,819,065*	*$8,819,065*	*$8,819,065*	*$8,819,065*
per unit	*$551,192*	*$551,192*	*$551,192*	*$551,192*	*$551,192*
per gross residential sf	*$406*	*$406*	*$406*	*$406*	*$406*
Soft Costs					
City Permits and Fees (a)	$851,715	$851,715	$851,715	$851,715	$851,715
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$1,043,600
Other Soft Costs	$1,852,004	$1,852,004	$1,852,004	$1,852,004	$1,852,004
Subtotal Soft Costs	*$2,703,718*	*$2,703,718*	*$2,703,718*	*$2,703,718*	*$3,747,318*
Financing Costs					
Total Financing Costs	*$691,367*	*$691,367*	*$691,367*	*$691,367*	*$753,983*
Total Development Costs					
Total Development Costs	*$18,214,151*	*$18,214,151*	*$18,214,151*	*$18,214,151*	*$19,320,367*
per unit	*$1,138,384*	*$1,138,384*	*$1,138,384*	*$1,138,384*	*$1,207,523*
per gross residential sf	*$838*	*$838*	*$838*	*$838*	*$889*
Financial Feasibility					
Net Revenue (b)	$3,785,849	$1,581,701	$924,382	$267,063	$2,679,633
Return on Cost (c)	20.79%	8.68%	5.08%	1.47%	13.87%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Return on cost is the net revenue, divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 23: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 1B (TOWNHOUSE, SOFA-II RT 35, REDUCED RETAIL AND REDUCED PARKING)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Capitalized Value	$22,000,000	$19,795,852	$19,138,533	$18,481,214	$22,000,000
Retail Capitalized Value	$0	$0	$0	$0	$0
Total Capitalized Value	*$22,000,000*	*$19,795,852*	*$19,138,533*	*$18,481,214*	*$22,000,000*
per unit	*$1,375,000*	*$1,237,241*	*$1,196,158*	*$1,155,076*	*$1,375,000*
Development Costs					
Land Costs					
Total Land Cost	*$6,000,000*	*$6,000,000*	*$6,000,000*	*$6,000,000*	*$6,000,000*
per unit	$375,000	$375,000	$375,000	$375,000	$375,000
Hard Costs					
Site Prep	$544,500	$544,500	$544,500	$544,500	$544,500
Residential Building Area	$5,869,565	$5,869,565	$5,869,565	$5,869,565	$5,869,565
Retail Building Area (Including TIs)	$262,500	$262,500	$262,500	$262,500	$262,500
Parking	$640,000	$640,000	$640,000	$640,000	$640,000
Subtotal Hard Costs	*$7,316,565*	*$7,316,565*	*$7,316,565*	*$7,316,565*	*$7,316,565*
per unit	*$457,285*	*$457,285*	*$457,285*	*$457,285*	*$457,285*
per gross residential sf	*$337*	*$337*	*$337*	*$337*	*$337*
Soft Costs					
City Permits and Fees (a)	$761,154	$761,154	$761,154	$761,154	$761,154
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$1,043,600
Other Soft Costs	$1,536,479	$1,536,479	$1,536,479	$1,536,479	$1,536,479
Subtotal Soft Costs	*$2,297,633*	*$2,297,633*	*$2,297,633*	*$2,297,633*	*$3,341,233*
Financing Costs					
Total Financing Costs	*$576,852*	*$576,852*	*$576,852*	*$576,852*	*$639,468*
Total Development Costs					
Total Development Costs	*$16,191,050*	*$16,191,050*	*$16,191,050*	*$16,191,050*	*$17,297,266*
per unit	*$1,011,941*	*$1,011,941*	*$1,011,941*	*$1,011,941*	*$1,081,079*
per gross residential sf	*$745*	*$745*	*$745*	*$745*	*$796*
Financial Feasibility					
Net Revenue (b)	$5,808,950	$3,604,802	$2,947,483	$2,290,164	$4,702,734
Return on Cost (c)	35.88%	22.26%	18.20%	14.14%	27.19%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Return on cost is the net revenue, divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 24: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 2A (DOWNTOWN CONDOMINIUMS, CD-C WITH HIP)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Capitalized Value	$41,200,000	$36,725,955	$35,356,073	$33,986,191	$41,200,000
Retail Capitalized Value	$0	$0	$0	$0	$0
Total Capitalized Value	*$41,200,000*	*$36,725,955*	*$35,356,073*	*$33,986,191*	*$41,200,000*
per unit	*$1,584,615*	*$1,412,537*	*$1,359,849*	*$1,307,161*	*$1,584,615*
Development Costs					
Land Costs					
Total Land Cost	*$5,165,289*	*$5,165,289*	*$5,165,289*	*$5,165,289*	*$5,165,289*
per unit	$198,665	$198,665	$198,665	$198,665	$198,665
Hard Costs					
Site Prep	$375,000	$375,000	$375,000	$375,000	$375,000
Residential Building Area	$13,176,471	$13,176,471	$13,176,471	$13,176,471	$13,176,471
Retail Building Area (Including TIs)	$656,250	$656,250	$656,250	$656,250	$656,250
Parking	$5,300,000	$5,300,000	$5,300,000	$5,300,000	$5,300,000
Subtotal Hard Costs	*$19,507,721*	*$19,507,721*	*$19,507,721*	*$19,507,721*	*$19,507,721*
per unit	*$750,297*	*$750,297*	*$750,297*	*$750,297*	*$750,297*
per gross residential sf	*$474*	*$474*	*$474*	*$474*	*$474*
Soft Costs					
City Permits and Fees (a)	$1,362,353	$1,362,353	$1,362,353	$1,362,353	$1,362,353
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$1,826,300
Other Soft Costs	$4,096,621	$4,096,621	$4,096,621	$4,096,621	$4,096,621
Subtotal Soft Costs	*$5,458,974*	*$5,458,974*	*$5,458,974*	*$5,458,974*	*$7,285,274*
Financing Costs					
Total Financing Costs	*$1,498,002*	*$1,498,002*	*$1,498,002*	*$1,498,002*	*$1,607,580*
Total Development Costs					
Total Development Costs	*$31,629,985*	*$31,629,985*	*$31,629,985*	*$31,629,985*	*$33,565,863*
per unit	*$1,216,538*	*$1,216,538*	*$1,216,538*	*$1,216,538*	*$1,290,995*
per gross residential sf	*$768*	*$768*	*$768*	*$768*	*$815*
Financial Feasibility					
Net Revenue (b)	$9,570,015	$5,095,969	$3,726,087	$2,356,205	$7,634,137
Return on Cost (c)	30.26%	16.11%	11.78%	7.45%	22.74%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Return on cost is the net revenue, divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 25: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 2B (DOWNTOWN CONDOMINIUMS, CD-C WITH HIP, REDUCED RETAIL AND REDUCED PARKING)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Capitalized Value	$41,200,000	$36,725,955	$35,356,073	$33,986,191	$41,200,000
Retail Capitalized Value	$0	$0	$0	$0	$0
Total Capitalized Value	*$41,200,000*	*$36,725,955*	*$35,356,073*	*$33,986,191*	*$41,200,000*
per unit	*$1,584,615*	*$1,412,537*	*$1,359,849*	*$1,307,161*	*$1,584,615*
Development Costs					
Land Costs					
Total Land Cost	*$5,165,289*	*$5,165,289*	*$5,165,289*	*$5,165,289*	*$5,165,289*
per unit	$198,665	$198,665	$198,665	$198,665	$198,665
Hard Costs					
Site Prep	$375,000	$375,000	$375,000	$375,000	$375,000
Residential Building Area	$13,176,471	$13,176,471	$13,176,471	$13,176,471	$13,176,471
Retail Building Area (Including TIs)	$262,500	$262,500	$262,500	$262,500	$262,500
Parking	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000
Subtotal Hard Costs	*$16,413,971*	*$16,413,971*	*$16,413,971*	*$16,413,971*	*$16,413,971*
per unit	*$631,307*	*$631,307*	*$631,307*	*$631,307*	*$631,307*
per gross residential sf	*$399*	*$399*	*$399*	*$399*	*$399*
Soft Costs					
City Permits and Fees (a)	$1,234,057	$1,234,057	$1,234,057	$1,234,057	$1,234,057
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$1,826,300
Other Soft Costs	$3,446,934	$3,446,934	$3,446,934	$3,446,934	$3,446,934
Subtotal Soft Costs	*$4,680,991*	*$4,680,991*	*$4,680,991*	*$4,680,991*	*$6,507,291*
Financing Costs					
Total Financing Costs	*$1,265,698*	*$1,265,698*	*$1,265,698*	*$1,265,698*	*$1,375,276*
Total Development Costs					
Total Development Costs	*$27,525,948*	*$27,525,948*	*$27,525,948*	*$27,525,948*	*$29,461,826*
per unit	*$1,058,690*	*$1,058,690*	*$1,058,690*	*$1,058,690*	*$1,133,147*
per gross residential sf	*$668*	*$668*	*$668*	*$668*	*$716*
Financial Feasibility					
Net Revenue (b)	$13,674,052	$9,200,007	$7,830,124	$6,460,242	$11,738,174
Return on Cost (c)	49.68%	33.42%	28.45%	23.47%	39.84%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs.(c) Return on cost is the net revenue, divided by total
Source: Strategic Economics, 2020.

FIGURE 26: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 3A (DOWNTOWN APARTMENTS, CD-C WITH HIP)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Net Operating Income	$1,673,685	$1,539,802	$1,504,916	$1,459,617	$1,673,685
Retail Net Operating Income	$0	$0	$0	$0	$0
Total Net Operating Income	*$1,673,685*	*$1,539,802*	*$1,504,916*	*$1,459,617*	*$1,673,685*
Total Capitalized Value	$39,380,824	$36,230,644	$35,409,779	$34,343,936	$39,380,824
per unit	*$729,275*	*$670,938*	*$655,737*	*$635,999*	*$729,275*
Development Costs					
Land Costs					
Total Land Cost	*$4,132,231*	*$4,132,231*	*$4,132,231*	*$4,132,231*	*$4,132,231*
per unit	$76,523	$76,523	$76,523	$76,523	$76,523
Hard Costs					
Site Prep	$375,000	$375,000	$375,000	$375,000	$375,000
Residential Building Area	$12,335,294	$12,335,294	$12,335,294	$12,335,294	$12,335,294
Retail Building Area (Including TIs)	$656,250	$656,250	$656,250	$656,250	$656,250
Parking	$6,300,000	$6,300,000	$6,300,000	$6,300,000	$6,300,000
Subtotal Hard Costs	*$19,666,544*	*$19,666,544*	*$19,666,544*	*$19,666,544*	*$19,666,544*
per unit	*$364,195*	*$364,195*	*$364,195*	*$364,195*	*$364,195*
per gross residential sf	*$478*	*$478*	*$478*	*$478*	*$478*
Soft Costs					
City Permits and Fees (a)	$2,099,881	$2,099,881	$2,099,881	$2,099,881	$2,099,881
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$729,407
Other Soft Costs	$4,129,974	$4,129,974	$4,129,974	$4,129,974	$4,129,974
Subtotal Soft Costs	*$6,229,855*	*$6,229,855*	*$6,229,855*	*$6,229,855*	*$6,959,262*
Financing Costs					
Total Financing Costs	*$1,553,784*	*$1,553,784*	*$1,553,784*	*$1,553,784*	*$1,597,548*
Total Development Costs					
Total Development Costs	*$31,582,415*	*$31,582,415*	*$31,582,415*	*$31,582,415*	*$32,355,586*
per unit	*$584,860*	*$584,860*	*$584,860*	*$584,860*	*$599,178*
per gross residential sf	*$768*	*$768*	*$768*	*$768*	*$787*
Financial Feasibility					
Net Revenue (b)	$7,798,409	$4,648,229	$3,827,364	$2,761,522	$7,025,238
Yield on Cost (c)	5.30%	4.88%	4.77%	4.62%	5.17%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Yield on cost is the total project net operating income divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 27: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 3B (DOWNTOWN APARTMENTS, CD-C WITH HIP, REDUCED RETAIL AND REDUCED PARKING)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Net Operating Income	$1,673,685	$1,539,802	$1,504,916	$1,459,617	$1,673,685
Retail Net Operating Income	$0	$0	$0	$0	$0
Total Net Operating Income	*$1,673,685*	*$1,539,802*	*$1,504,916*	*$1,459,617*	*$1,673,685*
Total Capitalized Value	$39,380,824	$36,230,644	$35,409,779	$34,343,936	$39,380,824
per unit	*$729,275*	*$670,938*	*$655,737*	*$635,999*	*$729,275*
Development Costs					
Land Costs					
Total Land Cost	*$4,132,231*	*$4,132,231*	*$4,132,231*	*$4,132,231*	*$4,132,231*
per unit	$76,523	$76,523	$76,523	$76,523	$76,523
Hard Costs					
Site Prep	$375,000	$375,000	$375,000	$375,000	$375,000
Residential Building Area	$12,335,294	$12,335,294	$12,335,294	$12,335,294	$12,335,294
Retail Building Area (Including TIs)	$262,500	$262,500	$262,500	$262,500	$262,500
Parking	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
Subtotal Hard Costs	*$18,372,794*	*$18,372,794*	*$18,372,794*	*$18,372,794*	*$18,372,794*
per unit	*$340,237*	*$340,237*	*$340,237*	*$340,237*	*$340,237*
per gross residential sf	*$447*	*$447*	*$447*	*$447*	*$447*
Soft Costs					
City Permits and Fees (a)	$1,989,585	$1,989,585	$1,989,585	$1,989,585	$1,989,585
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$729,407
Other Soft Costs	$3,858,287	$3,858,287	$3,858,287	$3,858,287	$3,858,287
Subtotal Soft Costs	*$5,847,872*	*$5,847,872*	*$5,847,872*	*$5,847,872*	*$6,577,278*
Financing Costs					
Total Financing Costs	*$1,453,240*	*$1,453,240*	*$1,453,240*	*$1,453,240*	*$1,497,004*
Total Development Costs					
Total Development Costs	*$29,806,137*	*$29,806,137*	*$29,806,137*	*$29,806,137*	*$30,579,308*
per unit	*$551,966*	*$551,966*	*$551,966*	*$551,966*	*$566,283*
per gross residential sf	*$725*	*$725*	*$725*	*$725*	*$744*
Financial Feasibility					
Net Revenue (b)	$9,574,686	$6,424,507	$5,603,641	$4,537,799	$8,801,515
Yield on Cost (c)	5.62%	5.17%	5.05%	4.90%	5.47%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Yield on cost is the total project net operating income divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 28: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 4A (CONDOMINIUMS, CS WITH HIP)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Capitalized Value	$36,000,000	$31,969,815	$30,723,166	$29,476,517	$36,000,000
Retail Capitalized Value	$0	$0	$0	$0	$0
Total Capitalized Value	*$36,000,000*	*$31,969,815*	*$30,723,166*	*$29,476,517*	*$36,000,000*
per unit	*$1,800,000*	*$1,598,491*	*$1,536,158*	*$1,473,826*	*$1,800,000*
Development Costs					
Land Costs					
Total Land Cost	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*
per unit	$410,854	$410,854	$410,854	$410,854	$410,854
Hard Costs					
Site Prep	$745,700	$745,700	$745,700	$745,700	$745,700
Residential Building Area	$11,294,118	$11,294,118	$11,294,118	$11,294,118	$11,294,118
Retail Building Area (Including TIs)	$1,581,125	$1,581,125	$1,581,125	$1,581,125	$1,581,125
Parking	$4,417,250	$4,417,250	$4,417,250	$4,417,250	$4,417,250
Subtotal Hard Costs	*$18,038,193*	*$18,038,193*	*$18,038,193*	*$18,038,193*	*$18,038,193*
per unit	*$901,910*	*$901,910*	*$901,910*	*$901,910*	*$901,910*
per gross residential sf	*$511*	*$511*	*$511*	*$511*	*$511*
Soft Costs					
City Permits and Fees (a)	$1,311,400	$1,311,400	$1,311,400	$1,311,400	$1,311,400
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$1,565,400
Other Soft Costs	$3,788,020	$3,788,020	$3,788,020	$3,788,020	$3,788,020
Subtotal Soft Costs	*$5,099,421*	*$5,099,421*	*$5,099,421*	*$5,099,421*	*$6,664,821*
Financing Costs					
Total Financing Costs	*$1,388,257*	*$1,388,257*	*$1,388,257*	*$1,388,257*	*$1,482,181*
Total Development Costs					
Total Development Costs	*$32,742,950*	*$32,742,950*	*$32,742,950*	*$32,742,950*	*$34,402,274*
per unit	*$1,637,147*	*$1,637,147*	*$1,637,147*	*$1,637,147*	*$1,720,114*
per gross residential sf	*$928*	*$928*	*$928*	*$928*	*$975*
Financial Feasibility					
Net Revenue (b)	$3,257,050	-$773,135	-$2,019,784	-$3,266,433	$1,597,726
Return on Cost (c)	9.95%	-2.36%	-6.17%	-9.98%	4.64%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Return on cost is the net revenue, divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 29: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 4B (CONDOMINIUMS, CS WITH HIP, REDUCED RETAIL AND REDUCED PARKING)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Capitalized Value	$36,000,000	$31,969,815	$30,723,166	$29,476,517	$36,000,000
Retail Capitalized Value	$0	$0	$0	$0	$0
Total Capitalized Value	*$36,000,000*	*$31,969,815*	*$30,723,166*	*$29,476,517*	*$36,000,000*
per unit	*$1,800,000*	*$1,598,491*	*$1,536,158*	*$1,473,826*	*$1,800,000*
Development Costs					
Land Costs					
Total Land Cost	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*
per unit	$410,854	$410,854	$410,854	$410,854	$410,854
Hard Costs					
Site Prep	$745,700	$745,700	$745,700	$745,700	$745,700
Residential Building Area	$11,294,118	$11,294,118	$11,294,118	$11,294,118	$11,294,118
Retail Building Area (Including TIs)	$262,500	$262,500	$262,500	$262,500	$262,500
Parking	$800,000	$800,000	$800,000	$800,000	$800,000
Subtotal Hard Costs	*$13,102,318*	*$13,102,318*	*$13,102,318*	*$13,102,318*	*$13,102,318*
per unit	*$655,116*	*$655,116*	*$655,116*	*$655,116*	*$655,116*
per gross residential sf	*$371*	*$371*	*$371*	*$371*	*$371*
Soft Costs					
City Permits and Fees (a)	$1,010,906	$1,010,906	$1,010,906	$1,010,906	$1,010,906
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$1,565,400
Other Soft Costs	$2,751,487	$2,751,487	$2,751,487	$2,751,487	$2,751,487
Subtotal Soft Costs	*$3,762,392*	*$3,762,392*	*$3,762,392*	*$3,762,392*	*$5,327,792*
Financing Costs					
Total Financing Costs	*$1,011,883*	*$1,011,883*	*$1,011,883*	*$1,011,883*	*$1,105,807*
Total Development Costs					
Total Development Costs	*$26,093,672*	*$26,093,672*	*$26,093,672*	*$26,093,672*	*$27,752,996*
per unit	*$1,304,684*	*$1,304,684*	*$1,304,684*	*$1,304,684*	*$1,387,650*
per gross residential sf	*$739*	*$739*	*$739*	*$739*	*$786*
Financial Feasibility					
Net Revenue (b)	$9,906,328	$5,876,143	$4,629,494	$3,382,845	$8,247,004
Return on Cost (c)	37.96%	22.52%	17.74%	12.96%	29.72%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Return on cost is the net revenue, divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 30: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 5A (APARTMENTS, CS WITH HIP)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Net Operating Income	$1,474,785	$1,361,326	$1,332,458	$1,294,021	$1,474,785
Retail Net Operating Income	$0	$0	$0	$0	$0
Total Net Operating Income	*$1,474,785*	*$1,361,326*	*$1,332,458*	*$1,294,021*	*$1,474,785*
Total Capitalized Value	$34,700,824	$32,031,196	$31,351,949	$30,447,558	$34,700,824
per unit	*$694,016*	*$640,624*	*$627,039*	*$608,951*	*$694,016*
Development Costs					
Land Costs					
Total Land Cost	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*
per unit	$164,342	$164,342	$164,342	$164,342	$164,342
Hard Costs					
Site Prep	$745,700	$745,700	$745,700	$745,700	$745,700
Residential Building Area	$10,694,118	$10,694,118	$10,694,118	$10,694,118	$10,694,118
Retail Building Area (Including TIs)	$1,581,125	$1,581,125	$1,581,125	$1,581,125	$1,581,125
Parking	$5,117,250	$5,117,250	$5,117,250	$5,117,250	$5,117,250
Subtotal Hard Costs	*$18,138,193*	*$18,138,193*	*$18,138,193*	*$18,138,193*	*$18,138,193*
per unit	*$362,764*	*$362,764*	*$362,764*	*$362,764*	*$362,764*
per gross residential sf	*$509*	*$509*	*$509*	*$509*	*$509*
Soft Costs					
City Permits and Fees (a)	$2,098,641	$2,098,641	$2,098,641	$2,098,641	$2,098,641
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$632,361
Other Soft Costs	$3,809,020	$3,809,020	$3,809,020	$3,809,020	$3,809,020
Subtotal Soft Costs	*$5,907,662*	*$5,907,662*	*$5,907,662*	*$5,907,662*	*$6,540,023*
Financing Costs					
Total Financing Costs	*$1,442,751*	*$1,442,751*	*$1,442,751*	*$1,442,751*	*$1,480,693*
Total Development Costs					
Total Development Costs	*$33,705,685*	*$33,705,685*	*$33,705,685*	*$33,705,685*	*$34,375,988*
per unit	*$674,114*	*$674,114*	*$674,114*	*$674,114*	*$687,520*
per gross residential sf	*$946*	*$946*	*$946*	*$946*	*$964*
Financial Feasibility					
Net Revenue (b)	$995,138	-$1,674,489	-$2,353,736	-$3,258,128	$324,836
Yield on Cost (c)	4.38%	4.04%	3.95%	3.84%	4.29%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Yield on cost is the total project net operating income divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 31: FINANCIAL FEASIBILITY RESULTS: PROTOTYPE 5B (APARTMENTS, CS WITH HIP, REDUCED RETAIL AND REDUCED PARKING)

	Baseline Scenario: No Requirements	Scenario 1: 15% On-Site	Scenario 2: 20% On-Site	Scenario 3: 25% On-Site	Scenario 4: In-Lieu Fee
Revenues					
Residential Net Operating Income	$1,508,423	$1,392,170	$1,362,558	$1,323,178	$1,508,423
Retail Net Operating Income	$0	$0	$0	$0	$0
Total Net Operating Income	*$1,508,423*	*$1,392,170*	*$1,362,558*	*$1,323,178*	*$1,508,423*
Total Capitalized Value	$35,492,294	$32,756,935	$32,060,200	$31,133,594	$35,492,294
per unit	*$695,927*	*$642,293*	*$628,631*	*$610,463*	*$695,927*
Development Costs					
Land Costs					
Total Land Cost	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*	*$8,217,080*
per unit	$161,119	$161,119	$161,119	$161,119	$161,119
Hard Costs					
Site Prep	$745,700	$745,700	$745,700	$745,700	$745,700
Residential Building Area	$10,958,824	$10,958,824	$10,958,824	$10,958,824	$10,958,824
Retail Building Area (Including TIs)	$262,500	$262,500	$262,500	$262,500	$262,500
Parking	$1,530,000	$1,530,000	$1,530,000	$1,530,000	$1,530,000
Subtotal Hard Costs	*$13,497,024*	*$13,497,024*	*$13,497,024*	*$13,497,024*	*$13,497,024*
per unit	*$264,648*	*$264,648*	*$264,648*	*$264,648*	*$264,648*
per gross residential sf	*$369*	*$369*	*$369*	*$369*	*$369*
Soft Costs					
City Permits and Fees (a)	$1,834,188	$1,834,188	$1,834,188	$1,834,188	$1,834,188
Affordable Housing In-Lieu Fees	$0	$0	$0	$0	$648,014
Other Soft Costs	$2,834,375	$2,834,375	$2,834,375	$2,834,375	$2,834,375
Subtotal Soft Costs	*$4,668,563*	*$4,668,563*	*$4,668,563*	*$4,668,563*	*$5,316,576*
Financing Costs					
Total Financing Costs	*$1,089,935*	*$1,089,935*	*$1,089,935*	*$1,089,935*	*$1,128,816*
Total Development Costs					
Total Development Costs	*$27,472,601*	*$27,472,601*	*$27,472,601*	*$27,472,601*	*$28,159,496*
per unit	*$538,678*	*$538,678*	*$538,678*	*$538,678*	*$552,147*
per gross residential sf	*$752*	*$752*	*$752*	*$752*	*$771*
Financial Feasibility					
Net Revenue (b)	$8,019,693	$5,284,333	$4,587,598	$3,660,993	$7,332,799
Yield on Cost (c)	5.49%	5.07%	4.96%	4.82%	5.36%

(a) Excluding affordable housing in-lieu fee payment. (b) Net revenue is the project total revenue minus total development costs. (c) Yield on cost is the total project net operating income divided by total development costs.
Source: Strategic Economics, 2020.

FIGURE 32: FEASIBILITY RESULTS FOR OWNERSHIP PROTOTYPES

	Prototype 1a Townhouse, Retail, Fully Parked	Prototype 1b Townhouse, Reduced Retail, Reduced Parking	Prototype 2a Downtown Condo Flats, Retail, Fully Parked	Prototype 2b Downtown Condo Flats, Reduced Retail, Reduced Parking	Prototype 4a Condo Flats, Retail, Fully Parked	Prototype 4b Condo Flats, Reduced Retail, Reduced Parking
Zoning	**SOFA-II, RT 35**	**SOFA-II, RT 35**	**CD-C (with HIP)**	**CD-C (with HIP)**	**CS (with HIP)**	**CS (with HIP)**
Density (DU/Acre)	32	32	76	76	29	29
Floor-Area-Ratio (FAR)	1.14	1.07	3.00	2.85	1.49	1.23
Return on Cost						
Baseline (No Requirement)	20.79%	35.88%	30.26%	49.68%	9.95%	37.96%
Scenario 1 (15% On-Site)	8.68%	22.26%	16.11%	33.42%	-2.36%	22.52%
Scenario 2 (20% On-Site)	5.08%	18.20%	11.78%	28.45%	-6.17%	17.74%
Scenario 3 (25% On-Site)	1.47%	14.14%	7.45%	23.47%	-9.98%	12.96%
Scenario 4 (In-Lieu Fee)	13.87%	27.19%	22.74%	39.84%	4.64%	29.72%

Source: Strategic Economics, 2020.

FIGURE 33: FEASIBILITY RESULTS FOR RENTAL PROTOTYPES

	Prototype 3a Downtown Apartments, Retail, Fully Parked	Prototype 3b Downtown Apartments, Reduced Retail, Reduced Parking	Prototype 5a Apartments, Retail, Fully Parked	Prototype 5b Apartments, Reduced Retail, Reduced Parking
Zoning	**CD-C (with HIP)**	**CD-C (with HIP)**	**CS (with HIP)**	**CS (with HIP)**
Density (DU/Acre)	157	157	73	74
Floor-Area-Ratio (FAR)	2.99	3.00	1.50	1.27
Yield on Cost				
Baseline (No Requirement)	5.30%	5.62%	4.38%	5.49%
Scenario 1 (15% On-Site)	4.88%	5.17%	4.04%	5.07%
Scenario 2 (20% On-Site)	4.77%	5.05%	3.95%	4.96%
Scenario 3 (25% On-Site)	4.62%	4.90%	3.84%	4.82%
Scenario 4 (In-Lieu Fee)	5.17%	5.47%	4.29%	5.36%

Source: Strategic Economics, 2020.

Highly Likely
Somewhat Likely
Less Likely
Infeasible

APPENDIX

The appendix includes additional information on:

- Recent condominium re-sales in Palo Alto and surrounding cities (Figure A-1)
- Recent rental project comparables in Palo Alto and surrounding cities (Figure A-2)
- Recent land sale transactions, used to inform the land cost assumptions (Figure A-3)
- Detailed calculation of city fees per unit (Figure A-4)

FIGURE A-1: RESIDENTIAL OWNERSHIP PROJECT COMPARABLES IN PALO ALTO, MOUNTAIN VIEW AND LOS ALTOS, SOLD IN 2018 AND 2019

Project Name	Product	City	Year Built	Sale Price Per Unit		Unit Size (Sq. Ft.)		Price Per Sq. Ft.	
				1 BD	2 BD	1 BD	2 BD	1 BD	2 BD
Echelon	Townhome-style condos	Palo Alto	2008		$1,775,000		1,130	1,131	$1,571
325 Channing Ave #105	Condo/Co-op	Palo Alto	2004		$3,400,000		2,114		$1,608
3282 Berryessa St	Townhouse	Palo Alto	2010		$1,713,000		1,519		$1,128
1101 W El Camino Real #405	Condo/Co-op	Mountain View	2017						
161 Jordan Ct	Condo/Co-op	Mountain View	2007		$1,240,000		1,236		$1,003
108 Bryant St #29	Condo/Co-op	Mountain View	2000		$1,355,000		1,078		$1,257
174 Jordan Ct	Condo/Co-op	Mountain View	2007		$1,300,000		1,594		$816
Peninsula Real	Stacked Condos	Los Altos	2008	$990,000	$1,400,833	787	1,200	$1,258	$1,167
4388 El Camino Real #130	Condo/Co-op	Los Altos	2009		$1,227,000		1,200		$1,023
100 1st St #108	Condo/Co-op	Los Altos	2015	$1,420,000		1,132		$1,254	
889 N San Antonio Rd	Condo/Co-op	Los Altos	2017		$1,405,000		1,124		$1,250
100 First	Condo/Co-op	Los Altos	2015	$1,194,833	$2,666,000	1,136	1,552	$1,052	$1,718
4388 El Camino Real	Condo/Co-op	Los Altos	2009		$1,227,000		1,200		$1,023
4388 El Camino Real #168	Condo/Co-op	Los Altos	2009		$1,410,000		1,200		$1,175
4388 El Camino Real #228	Condo/Co-op	Los Altos	2009		$1,465,000		1,200		$1,221
Average				**$1,201,611**	**$1,650,736**	**$1,018**	**$1,351**	**$1,188**	**$1,199**

Note: All transaction data from 2018 to 2019
Source: Polaris Pacific, Silicon Valley, 2019; Redfin, 2019; Strategic Economics, 2020.

FIGURE A-2: RESIDENTIAL RENTAL PROJECT COMPARABLES IN PALO ALTO AND MOUNTAIN VIEW, LEASING IN 2019

				Unit Mix			Unit Size (Sq. Ft.)			Rent Per Unit		
Project Name	City	Year Built	Total Units	Studios	1-BD	2-BD	Studios	1-BD	2-BD	Studios	1-BD	2-BD
Montage Apartments	Palo Alto	1998	46	N/A	34	12		700	1,000	$2,395	$4,328	$4,026
Park Plaza	Palo Alto	2016	82		20	58		843	1,046		$3,645	$4,075
Elan Mountain View	Mountain View	2018	164	12	129	20	571	748	1,112	$3,639	$4,041	$5,311
Avalon Towers on the Peninsula	Mountain View	2002	211		84	121		826	1,116		$4,102	$4,728
Montrose	Mountain View	2016	228		148	80		739	1,154		$3,957	$5,318
Verve	Mountain View	2017	155		70	85		884	1,302		$4,158	$5,647
Gemello Village	Mountain View	2000	52		20	20		729	1,123		$3,295	$3,970
Domus on the Boulevard	Mountain View	2015	193		125	68		791	1,048		$3,833	$5,304
Madera Apartments	Mountain View	2013	203		114	89		849	1,181		$4,247	$5,302
Park Place South	Mountain View	2000	120		61	56		773	1,055		$3,653	$4,272
100 Moffett	Mountain View	2016	184		140	44		791	1,233		$4,211	$5,540
The Village Residences	Mountain View	2013	330	41	223	66	574	798	1,257	$3,596	$4,639	$5,441
Weighted Average							**573**	**797**	**1,160**	**$3,507**	**$4,111**	**$5,137**

Source: Costar, 2019; Strategic Economics, 2020.

FIGURE A-3: RECENT MULTIFAMILY AND MIXED-USE RESIDENTIAL LAND SALE TRANSACTIONS IN PALO ALTO, MOUNTAIN VIEW, AND LOS ALTOS

Address	Land (Acres)	Land (sf)	Sale Price	Price per Acre	Price per sf	Sale Year	Proposed Use	Proposed Units	Proposed Dwelling Units/Acre	Price per Unit (if available)
410 Sierra Vista Ave, Mountain View	0.3	14,461	$5,514,257	$16,609,208	$381	2019	14 row-houses	14	42	$1,102,851
1950 Montecito Ave, Mountain View	1.9	80,586	$22,500,000	$12,162,162	$279	2019	33 row-houses	33	18	$661,764
257-259 Calderon, Mountain View	0.6	27,482	$10,900,000	$17,276,906	$397	2019	Unknown	Unknown	Unknown	$1,557,142
2005 Rock St, Mountain View	0.6	25,264	$8,800,000	$15,172,414	$348	2019	15 townhomes	15	26	$488,888
2044-2054 Montecito Ave, Mountain View	2.8	121,096	$37,450,000	$13,471,223	$309	2018	Unknown	Unknown	Unknown	$720,192
1540 Miramonte Ave, Los Altos	0.3	13,400	$2,050,000	$6,612,903	$153	2017	Four rental units and retail	4	13	$512,500
1960 Colony St, Mountain View	0.4	16,553	$3,200,000	$8,421,053	$193	2017	Multifamily	unknown	unknown	unknown
1020 Terra Bella Ave, Mountain View	0.5	22,080	$3,200,000	$6,274,510	$145	2017	Multifamily	unknown	unknown	unknown
950 W El Camino Real, Mountain View	0.6	26,314	$8,088,000	$13,480,000	$307	2017	71 below-market rate rental units	71	118	$113,915
788 San Antonio Rd, Palo Alto	1.0	43,996	$11,500,000	$11,386,139	$261	2018	Multifamily	37	36	$314,430
319 Sierra Vista Ave, Mountain View	0.9	40,511	$10,050,000	$10,806,452	$248	2017	15 townhomes	15	16	$670,000
1100 La Avenida Ave, Mountain View	1.0	41,817	$6,300,000	$6,562,500	$151	2018	Multifamily	unknown	unknown	unknown
2515 El Camino Real, Palo Alto	1.0	41,277	$23,000,000	$24,210,526	$557	2016	13 residential condos; office; retail	13	14	$1,769,231
333 Rengstorff Ave, Mountain View	1.8	79,187	$22,500,000	$12,362,637	$284	2018	Mutlifamily ownership condominiums	unknown	unknown	unknown
2700 W El Camino Real, Mountain View	2.3	98,933	$30,511,000	$13,440,969	$308	2018	Land is fully entitled for 221 apartment units	221	97	$138,059

Source: Costar, 2019; Strategic Economics, 2020.

FIGURE A-4: DETAILED CALCULATION OF THE PALO ALTO'S PERMITS AND FEES FOR EACH PROTOTYPE (PER UNIT)

	Prototype 1a Townhouse, Retail, Fully Parked	Prototype 1b Townhouse, Reduced Retail, Reduced Parking	Prototype 2a Downtown Condo Flats, Retail, Fully Parked	Prototype 2b Downtown Condo Flats, Reduced Retail, Reduced Parking	Prototype 3a Downtown Apartments, Retail, Fully Parked	Prototype 3b Downtown Apartments, Reduced Retail, Reduced Parking
Building Permit Fees[1]						
Building Permit Fee	$59,917	$59,917	$97,366	$97,366	$202,221	$202,221
Building Plan Check Fee	$44,938	$44,938	$73,024	$73,024	$151,666	$151,666
C&D Commercial/Multifamily > 25k & all Demo	$342	$342	$342	$342	$342	$342
City Tree Inspection - Res over 100K or Demo	$162	$162	$162	$162	$162	$162
Comprehensive Plan Maintenance Fee	$4,354	$4,354	$7,076	$7,076	$14,695	$14,695
Fire Plan Check - Commercial and Multifamily	$32,355	$32,355	$52,577	$52,577	$109,199	$109,199
Landscape Inspection Fee	$213	$213	$213	$213	$213	$213
Landscape Plan Check - Commercial and Multifamily	$2,176	$2,176	$2,176	$2,176	$2,176	$2,176
Multifamily New Building (4 or more attached units)	$1,709	$1,709	$1,709	$1,709	$1,709	$1,709
Public Works Plan Check Fee	$26,364	$26,364	$42,841	$42,841	$88,977	$88,977
Records Retention	$645	$645	$645	$645	$645	$645
SB 1473 Mandated Fee	$160	$160	$260	$260	$540	$540
SMIP Residential	$519	$519	$844	$844	$1,753	$1,753
Zoning Plan Check Fee	$20,971	$20,971	$34,078	$34,078	$70,777	$70,777
Subtotal	$194,826	$194,826	$313,313	$313,313	$645,076	$645,076
Public Works[2]						
Grading and Street Paving	$11,513	$11,513	$11,513	$11,513	$11,513	$11,513
Utilities[3]						
Gas, Water, Wastewater, Storm Drain	$103,000	$103,000	$158,000	$158,000	$312,000	$312,000
School District Fees[4]						
Residential Development	$82,391	$82,391	$156,059	$156,059	$155,836	$155,836
Commercial Development	$1,830	$915	$2,288	$915	$2,288	$915
Subtotal	$84,221	$83,306	$158,346	$156,974	$158,123	$156,751
Residential Development Impact Fees[5]						
Community Facilities						
Parks	$130,256	$130,256	$179,466	$179,466	$222,264	$222,264
Community Centers	$33,952	$33,952	$46,764	$46,764	$57,834	$57,834
Libraries	$10,784	$10,784	$15,092	$15,092	$19,980	$19,980
Public Safety Facilities	$13,840	$13,840	$22,490	$22,490	$46,710	$46,710
General Government Facilities	$17,424	$17,424	$28,314	$28,314	$58,806	$58,806
Citywide Transportation Impact Fee	$78,247	$78,247	$127,151	$127,151	$264,083	$264,083
Public Art Fee	$88,191	$73,166	$195,077	$164,140	$196,665	$183,728
Parkland Dedication	$0	$0	$0	$0	$0	$0
Affordable Housing In-Lieu Fee[6]	$0	$0	$0	$0	$0	$0
Subtotal	$372,693	$357,668	$614,354	$583,417	$866,342	$853,405
Commercial Development Impact Fees						
Community Facilities[7]	$21,681	$10,841	$27,101	$10,841	$27,101	$10,841
Commercial Linkage Fee	$63,780	$0	$79,725	$0	$79,725	$0
Subtotal	$85,461	$10,841	$106,826	$10,841	$106,826	$10,841
Per Unit Total	**$53,232**	**$47,572**	**$52,398**	**$47,464**	**$38,887**	**$36,844**

(see notes and sources on next page)

[1] Building permit fee amounts for each prototype were provided by the City of Palo Alto, August 2019 and Strategic Economics calculated per unit amounts
[2] Public work fee amounts were estimated by Strategic Economics based on fee amount of the most recent and comparable Palo Alto residential development project (2500 El Camino Real)
[3] Utilities fee amounts were estimated by Strategic Economics based on data the City of Palo Alto provided for similar prototypes
[4] School district fees are collected by the Palo Alto Unified School District, as described on the following website: https://www.pausd.org/business-services/school-impact-fees
[5] Palo Alto's development impact fees (updated August 20, 2019) are publicly available at the following website: https://www.cityofpaloalto.org/civicax/filebank/documents/27226
[6] Because this analysis is testing the impact of different inclusionary/in-lieu fee scenarios, the affordable housing in-lieu fees are calculated separately.
[7] Includes: Parks, Community Centers, Libraries, Public Safety Facilities, and General Government Facilities.
Source: City of Palo Alto, 2019; Strategic Economics, 2020.

FIGURE A-4: CONTINUED

	Prototype 4a Condo Flats, Retail, Fully Parked	Prototype 4b Condo Flats, Reduced Retail, Reduced Parking	Prototype 5a Apartments, Retail, Fully Parked	Prototype 5b Apartments, Reduced Retail, Reduced Parking
Building Permit Fees[1]				
Building Permit Fee	$74,897	$74,897	$187,242	$190,987
Building Plan Check Fee	$56,173	$56,173	$140,431	$143,240
C&D Commercial/Multifamily > 25k & all Demo	$342	$342	$342	$342
City Tree Inspection - Res over 100K or Demo	$162	$162	$162	$162
Comprehensive Plan Maintenance Fee	$5,443	$5,443	$13,607	$13,879
Fire Plan Check - Commercial and Multifamily	$40,444	$40,444	$101,111	$103,133
Landscape Inspection Fee	$213	$213	$213	$213
Landscape Plan Check - Commercial and Multifamily	$2,176	$2,176	$2,176	$2,176
Multifamily New Building (4 or more attached units)	$1,709	$1,709	$1,709	$1,709
Public Works Plan Check Fee	$32,955	$32,955	$82,386	$84,034
Records Retention	$645	$645	$645	$645
SB 1473 Mandated Fee	$200	$200	$500	$510
SMIP Residential	$649	$649	$1,623	$1,655
Zoning Plan Check Fee	$26,214	$26,214	$65,535	$66,845
Subtotal	$242,221	$242,221	$597,681	$609,530
Public Works[2]				
Grading and Street Paving	$11,513	$11,513	$11,513	$11,513
Utilities[3]				
Gas, Water, Wastewater, Storm Drain	$125,000	$125,000	$290,000	$295,500
School District Fees[4]				
Residential Development	$133,765	$133,765	$135,102	$138,446
Commercial Development	$5,511	$915	$5,511	$915
Subtotal	$139,276	$134,680	$140,614	$139,361
Residential Development Impact Fees[5]				
Community Facilities				
Parks	$162,820	$162,820	$205,800	$209,916
Community Centers	$42,440	$42,440	$53,550	$54,621
Libraries	$13,480	$13,480	$18,500	$18,870
Public Safety Facilities	$17,300	$17,300	$43,250	$44,115
General Government Facilities	$21,780	$21,780	$54,450	$55,539
Citywide Transportation Impact Fee	$97,808	$97,808	$244,521	$249,412
Public Art Fee	$180,382	$131,023	$181,382	$134,970
Parkland Dedication	$0	$0	$0	$0
Affordable Housing In-Lieu Fee[6]	$0	$0	$0	$0
Subtotal	$536,010	$486,652	$801,453	$767,443
Commercial Development Impact Fees				
Community Facilities[7]	$65,296	$10,841	$65,296	$10,841
Commercial Linkage Fee	$192,084	$0	$192,084	$0
Subtotal	$257,380	$10,841	$257,380	$10,841
Per Unit Total	**$65,570**	**$50,545**	**$41,973**	**$35,964**

(see notes and sources on next page)

[1] Building permit fee amounts for each prototype were provided by the City of Palo Alto, August 2019 and Strategic Economics calculated per unit amounts
[2] Public work fee amounts were estimated by Strategic Economics based on fee amount of the most recent and comparable Palo Alto residential development project (2500 El Camino Real)
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[6] Because this analysis is testing the impact of different inclusionary/in-lieu fee scenarios, the affordable housing in-lieu fees are calculated separately.
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Source: City of Palo Alto, 2019; Strategic Economics, 2020.