

the requirements for the degree of Master in Environmental Studies, York University Ontario, Canada

November 30, 2015

Abstract

The San Francisco Bay Area of California is in the midst of a housing supply and affordability crisis. As the birthplace of Silicon Valley and home to many technology powerhouses and startups attracting many newcomers, the City of Palo Alto, California shares in the greater Bay Area's struggle for sufficient housing supply and affordability. Palo Alto has experienced incredible growth as a technology powerhouse since the 1960's, which has placed great pressures on the housing supply and resulted in a remarkable increase in property values attainable to only the very wealthy. There is no one catchall solution to Palo Alto's housing supply and affordability struggle but one promising tool is development of Accessory Dwelling Units (ADUs) in the city's single-family residential districts. ADUs allow for unobtrusive, gradual intensification while increasing the housing stock and helping to ease unaffordability.

This major research paper traces the roots of Palo Alto's rise in the technology sector, the housing affordability crisis and the political and policy-based barriers that have so far prevented the facilitation of an effective ADU program. The perspectives of ADUs amongst Palo Altans will be assessed and the outlook for ADUs to be used as housing affordability tool in Palo Alto's near future will be considered.

Foreword

Throughout the course of my MES degree I have remained focused on broadening my understanding of the concept of liveability; what it means, how to measure it, and how it can be improved. Accordingly, my Plan of Study has consistently been centred on liveability and the role of planning in creating happy and healthy dense, urban environments. Having been living in downtown Toronto for seven years I found an intriguing angle for my major paper: liveability in downtown Toronto high-rise condominium communities.

This changed after relocating to Palo Alto, California earlier this year. I quickly realized how important it was for me to engage with a research topic with locational significance. While Silicon Valley is many things, a major centre of residential vertical living it is not. I came across an article in the Urban Land Institute Magazine about the potential for Accessory Dwelling Units (ADUs) increase housing supply and even reduce housing prices in unaffordable residential markets. Now experiencing for myself the most expensive housing in the United States, I found a new lens through which to continue studying liveability. In Palo Alto, I discovered not only the economic centre and birthplace of Silicon Valley technology and innovation, but also a city grappling with a housing affordability crisis born of its success and a population of divided, yet impassioned, city council members and residents trying to maintain Palo Alto's sense of place. ADUs are a well-suited method to help ease Palo Alto's housing unaffordability by adding non-invasive, incremental density while maintaining the unique character of its many single-family neighbourhoods. ADUs offer a flexible, scaled response to housing affordability and will adapt to Palo Altans changing needs over time.

Method

The research methods used in this major research paper were primarily qualitative, including interviews with local city council members and the City of Palo Alto planning department. In addition, I consulted primary documents, such as the Palo Alto's comprehensive plan and zoning code and secondary sources. To the extent helpful from an interpretive perspective, this paper also drew upon data regarding housing prices in Palo Alto.

Introduction

The San Francisco Bay area of California is in the midst of a serious housing affordability crisis. Supply cannot meet the demand of new residents flocking to the area to work for technology industry titans including Google, Apple, Facebook, LinkedIn and a multiplying network of technology startups driving property values to astronomical heights. Housing affordability is a multifaceted problem demanding a variety of approaches; the combination thereof varying drastically depending on the unique challenges faced by each community. Palo Alto, California is one such community, one in which the world's first semi-conductor was developed and serving as the de facto technology innovation capital of the world. From its successful economic machine, has emerged a growing housing supply and affordability crisis pricing out of the market the newcomer tech workers that drive it and an entire generation of young Palo Altans.

Though their popularity has waxed and waned over the past two centuries, along with shifting intended uses, Accessory Dwelling Units (ADUs) remain a recognizable and effective solution to housing shortages and affordability issues, particularly in low-density residential areas that can easily accommodate them. ADUs are known as an

integrative approach to adding slow incremental density to a residential neighbourhood while respecting its character. Nevertheless, the development of ADUs in Palo Alto a largely residential suburb with among the most severe housing shortage and affordability problems in the United States, is limited to a handful of ADUs constructed annually. Fundamentally, this is a result of restrictive zoning requirements reflecting the antigrowth stance of a group of Palo Altans known as "residentialists" who seek to maintain Palo Alto's character regardless of the place it holds in an evolving and growing Silicon Valley. It appears however, that the tide may be changing.

A History of Scholarship and Innovation

Incorporated in 1894 and located in Santa Clara County, Palo Alto may be best known as the birthplace of Silicon Valley. However, it was the institution of higher education that laid the foundation for technological entrepreneurialism to thrive. "It is fair to say that Leland Stanford single-handedly changed the fate of the region" (Gullard and Lund, 1989, p.79). Originally from a farming family in Albany, New York, Stanford was a founding partner of the Central Pacific Railroad and the South Pacific Railroad, which made him a multimillionaire (Gullard and Lund, 1989). Stanford, and his wife Jane Lathrop, independently founded the Leland Stanford Junior University, named after their son, and opened for its first class in 1891 (Gullard and Lund, 1989).

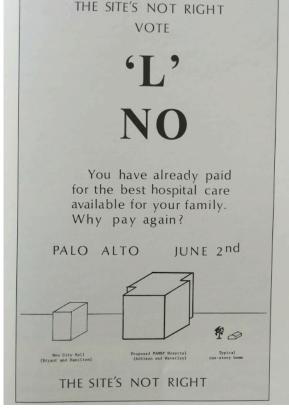
Founded in the spirit of entrepreneurialism, Stanford University's faculty and administration have a long history of nurturing an enterprising drive amongst its students creating long-term ties between the technology sector and academia (Auletta, 2012). A notable champion of this philosophy was Frederick Terman, a Stanford professor of radio engineering from 1943-1965 (Gillmor, 2004). Terman is often called the father of

Silicon Valley resulting from his mentorship of former Stanford students and HP founders William Hewlett and David Packard (Gillmor, 2004). It was Terman who encouraged the pair to develop their first product, an audio oscillator and helped them secure their first customer, Walt Disney in 1938 (Gillmor, 2004).

The 1950's marked a period of massive growth as Palo Alto transformed from a town of fields and orchards to a sophisticated, high-tech suburban centre (Sussman, 1994). The end of WWII brought an influx of new residents attracted by developments of affordable single-family homes (Winslow, 1993; Sussman, 1994). By the end of the 1950's, the city had tripled in area, 75 percent of the city's housing had been built and 26,000 new residents called Palo Alto home (Winslow, 1993; Sussman, 1994).

Palo Alto's downtown reached new heights when the development of a 15-story Palo Alto Office Center at 525 University Avenue was approved by council and completed in 1965 (Winslow, 1993). The project proved divisive, perhaps owing to the Modernist architecture, or its height relative to mostly flat single-story surroundings. Whatever the reason, the project demonstrated the power of aesthetics to bring citizens together around a common goal. This period in Palo Alto's history was unrivalled in cementing the deep sense of investment, dedication and participation in the civic process that endures amongst so many Palo Altans today. The rapid growth of the 1950's came to a head in the 1960's when an outspoken group of anti-development residents bound together (Winslow, 1993). The populace and city council soon split into pro-and anti-development camps, the former dubbed "the establishment" and the latter group were known as "the residentialists" (Winslow, 1993, p. 55).

Silicon Valley eventually earned its name in 1971 after a weekly trade newspaper called *Electronic News* ran a series on all the semiconductor companies operating throughout the area ("Evolution of Silicon," 2015). The founding of local venture capital firms like Kleiner Perkins in 1972 solidified venture capital as the launching pad for technology companies (Cutler, 2015). As the 1970's in Palo Alto became defined by a heyday



Opposition to proposed high-rise hospital in 1970's (Winslow, 1993).

of technological innovation, land developers spied opportunity, but their

efforts were quickly tempered. Recalling the outcome of the Palo Alto Office Center, several grand development plans proposed in the 1970's were successfully blocked by residentialists including two major commercial projects; one a high-rise hospital (Winslow, 1993). The "residentialist" credo was characterized by the preservation of Palo Alto's residential character while "the establishment" promoted what they termed a balanced growth approach (Winslow, 1993). For the next couple of decades, the majority of council seats were occupied by residentialist-minded council members and growth and development were held in check. The 1980's represented a period of planning decisions motivated by the goal of maintaining Palo Alto's family-friendly nature. Ironically, it was around this time that the city began to become less affordable for the families to

whom it claimed to be best suited. A disconnect began to emerge between the bucolic idealism of Palo Alto's early days and the new economic realities of Palo Alto's role in Silicon Valley. With ever-rising property values, the chasm has continued to widen and as the decades have passed, Palo Alto has fallen deeper into an affordability crisis.



Example of a detached cottage-style ADU (Porfolio, 2013).

The Story of ADUs

An ADU is a selfcontained, secondary living
space located either in or
attached to the primary unit, of
a single-family home, or
detached from the home but
sharing the same lot (Infranca,

2014; Litchfield, 2011). Typically, an ADU provides accommodations for one to two people and includes sleeping, living and bathroom areas, a simple kitchen, and a separate entrance (Litchfield, 2011; Ryan, 2015). ADUs include attic, basement, and garage conversions, additions, carve-out suites, and freestanding cottages (Litchfield, 2011). The term ADU is most popular amongst planners, architects and local governments but it is often used interchangeably with the terms secondary unit, secondary dwelling unit, accessory dwelling unit and private accessory dwelling (Litchfield, 2011). Colloquially, ADUs are known by a host of names including granny flat, granny cottage, in-law unit, mother-in-law suite, guest cottage, carriage unit, casita, garage apartment, attic apartment, basement apartment, home-within-a-home, sidekick house and laneway house (Litchfield, 2011; Infranca, 2014; Macht, 2015).

The existence of ADUs in North America dates back to the social practices of rural Amish families who would build a Grossdaadi Haus for elderly family members in order to maintain close spatial relationship between the generations (Antoninetti, 2008). However the idea of ADUs as an urban housing option is likely to have originated in 1830's London during a housing boom (Antoninetti, 2008). Wealthy homeowners built carriage houses in the alleys running between properties to serve as both a stable and as housing for hired labour on the floor above (Antoninetti, 2008). The concept made its way into British American colonies where the carriage house design was commonly



Example of a garage conversion ADU (Zenbox Design, 2014).

adopted, but subsequently
morphed into overcrowded
alley housing for poor
immigrant families. The first
few decades of the twentieth
century saw ADUs transform

into family-run rental structures and housing for

elderly family members.

The post–World War II period saw a reduction in ADUs as the United States went through rapid suburbanization wherein detached single-family dwelling zones were widely adopted and households transformed from extended, to nuclear families (Macht, 2015). City centres became less popular for residential housing in favour of low-density suburban neighbourhoods with safe streets and good schools (Day, 2000). Unlike previous generations, baby boomers started relocating across the country and the various

generations of families began living apart (Antoninetti, 2008). ADUs resurfaced once again in the 1980's as a housing solution for families to help care for



ageing relatives Carve-out-style interior ADU constructed in a former master bedroom (Joan Grimm, 2015).

(Antoninetti, 2008).

Since the 1980's ADUs have continued to be an effective way for families to provide eldercare, but have also generally become an important affordable housing tool by increasing housing supply through intensification: a return to the urban ADU's 19th century London roots. ADUs can also bring a number of positive social changes to neighbourhoods and increase the health, vibrancy and overall liveability of a community. The benefits of ADUs include:

1. Improved Affordability – ADUs can improve housing affordability through several direct and indirect ways. At a very basic level, ADUs placed in the rental market increase the housing supply and assist in relaxing high rental rates. Rental income allows property owners to defray mortgage and property tax payments, save for retirement and reduce the costs of housing upkeep in arrangements where tenants provide labour in exchange for rent at below market rates (BMR). Landlords who offer BMR assist in providing more housing options for financially-vulnerable segments of the population such as minimum-wage earners

- and low-salaried, high-value community service providers like teachers, nurses, eldercare workers, police and firefighters. ADUs used as rentals are more likely to be offered at BMR because owners often value the piece of mind of having reliable and trustworthy tenants more than collecting the maximum amount of rent possible (Norman, 2015).
- 2. Incremental Intensification ADUs provide a kind of "elegant density" to a neighbourhood wherein density is added relatively slowly on a project-by-project basis (Brown, 2015). Detached guest cottage ADUs are typically designed and constructed so as to match or compliment the design of the main dwelling and attached ADUs are often seamlessly blended with the main dwelling. Carve-out ADUs in particular effectively provide an invisible density as the alterations occur exclusively within the main dwelling without further expanding the footprint. In light of the above, ADUs are an ideal way to absorb more people and facilitate increased growth without altering the nature and character of the neighbourhood (Koch, 2011). Cities also benefit from an increased tax base as more properties are added to the housing stock improving the city's budget for local infrastructural improvements.
- 3. <u>Sustainability</u> By maximizing limited land resources in built-out areas with larger residential lots and tapping into existing public infrastructure, ADUs reduce further suburban sprawl (Infranca, 2014). Sprawl imposes high infrastructural costs in the form of expanded utility lines and roadways and holds destructive environmental implications as natural habitats are destroyed for new subdivisions and the burning of fossil fuels increase as people drive further distances outside of

urban cores. Further, due to their compact size ADUs are considered part of the eco-home and tiny house movements that focus on constructing environmentally friendly structures with fewer resources leaving a more minimal ecological footprint. ADUs also demand fewer resources in the construction period and tap into the existing utility and service lines of the main dwelling of the main property.

- 4. Socioeconomic Diversity In adding affordable housing to the rental stock ADUs help prevent the development of neighbourhood monocultures, particularly in more expensive single-family zoned districts. These districts are prone to clusters of upper-middle class and wealthy residents who occupy a similar demographic. ADUs help to create neighbourhoods with increased diversity amongst residents and facilitate the sharing of ideas and life experiences amongst varying economic classes and races (Brinig and Garnett, 2013)
- 5. Social Capital Social capital refers to how "individuals and communities create trust, maintain social networks, and establish norms" and foster cooperation and the establishment of shared goals (Foster, 2006, p. 529). Single-use zoning districts tend to inhibit social capital due to low-density large lots leading to fewer social interactions (Brinig and Garnett, 2013). ADUs add housing diversity to single-family neighbourhoods and new residents add density and contribute to the generation of healthy social capital. A high level of neighbourhood social capital is desirable as its presence indicates general social connectedness and brings about positive health effects, lower crime rates, reduced economic and social inequality, and higher levels of social tolerance (Putnam, 2001).

- 6. Ageing in Place One of the most trumpeted advantages of the ADU is its role in providing the elderly or infirm with the option to remain on their property for as long as possible (Litchfield, 2011). According to a study conducted by The American Association of Retired Persons (AARP) three-quarters of Americans over the aged 45 years and older "believe that they will be able to stay in their current home for the rest of their lives" (as cited by Antoninetti, 2008, p. 349). While this response may reflect their desires, living in one's original home may prove difficult should the development of mobility issues or illness occur. ADUs offer several flexible options for living independently either in a detached ADU while family members live in the main dwelling offering support as needed, or living in a self-contained attached unit. In these ADU arrangements the younger generation is able to assist the older generation, children get to know grandparents and familial bonds are strengthened (Litchfield, 2011). ADUs also offer lodging for healthcare workers who can support their elderly who avoid unnecessary or premature institutionalization. Overall, ADUs allow ageing residents to remain in the neighbourhoods they know and provide increased comfort, security and independence for as long as possible.
- 7. <u>Agglomeration</u> Agglomeration occurs when individuals or businesses benefit from living in close physical proximity to others (Schleicher, 2015).
 Agglomeration has become increasingly important in the modern economy by facilitating "information spillovers" between like-minded people (Schleicher, 2015). While traditional single-family zoning has created more physical distances

between residents, ADUs can shorten those distances by increasing density and bringing people closer together.

Given all of the benefits associated with ADU housing, it is instructive to consider a hypothetical scenario demonstrating the flexibility of an ADU to meet a family's housing needs throughout their lifetime. A young professional couple migrates to Palo Alto to work in the Silicon Valley tech sector. Wishing to live close to where they work, the couple purchases a single-family home in Palo Alto. Knowing they will be stretched financially as they settle into their careers, the couple determines that building an ADU will generate rental income and provide them with increased financial freedom. Eventually the couple has children and a couple moves into their ADU as renters. The couples become friends and in exchange for BMR rent, the renters help out with childcare and repairs and maintenance around the property. Years on, the couple's oldest child attends post-secondary education and returns to Palo Alto wishing to settle in the neighbourhood, but cannot afford it. The child moves into the ADU rent free, or perhaps at a subsidized rate. The child eventually marries a partner and moves out of the ADU. A couple, one a teacher the other a nurse with a modest combined annual income take the child's place. Once again, the couple offers the renters a BMR rent in exchange for help around the property. Eventually empty nesters, the couple no longer need the extra space and have grown tired of the upkeep and conclude they are ready to downsize. They approach their grown child with a proposal: she can move her growing family into the main dwelling and the couple will live in the ADU. The child eventually has children of her own and the couple, now grandparents, helps out with childcare. The couple age further and soon require assistance both from their family and care workers, but are able

to age in place and enjoy a comfortable daily life in the neighbourhood they know and love. Perhaps, the cycle continues with the same family or another, but the ADU can continue offer dynamic solutions to living affordably over the generations.

ADU developers.

While ADUs are not a prevalent housing type in Palo Alto, they are widespread in many cities across North America. In fact, ADUs have spurred a niche industry devoted to helping property owners navigate local municipal zoning codes and manage the permitting and construction processes in ADU development. Two particular ADU consultants operating out of Northern California are profiled below. The stories of the founders speak to their belief in the importance and viability of ADUs as a non-invasive method of neighbourhood intensification and improved affordability.

New Avenue Homes is a software-based platform that manages ADU construction by connecting homeowners with design and construction professionals (New Avenue Terms, 2014). New Avenue also acts as project manager by tendering the project and tracking the progress of the job (Norman, 2015). The company primarily works with a network of architects and contractors in the San Francisco Bay area, but endeavours to expand across the U.S. (Simonson, 2014). Thus far New Avenue has completed more than 100 ADU developments at an average cost of \$200,000 per project (Norman, 2015; Simonson, 2014). Struck by the limited options of owners and renters in a region plagued by dwindling supply and prohibitively high property values, founder Kevin Casey saw the potential for ADUs to provide homeowners with financial and spatial flexibility to meet shifting priorities (Norman, 2015). New Avenue offers users access to a new model of affordability by helping clients navigate the overwhelming design and construction

process and the often convoluted local planning regulations. To Casey "our communities should address our emotional and social needs" and facilitating the development of ADUs is an effective way to do it (Norman, 2015, p. 51)

Differing in its approach from New Avenue Homes is Lilypad Homes, an ADU consultant and developer operating on a nonprofit platform. Lilypad markets itself as not only an ADU consultant and developer, but as an ADU advocate and as a consultant to city agencies looking to encourage the development of ADUs in city planning documentation (Vision and Mission, 2015). Lilypad's mission is "to facilitate the development of second units that offer an affordable housing option for both homeowners and renters, creating economically healthy, diverse, multi-generational communities, and protecting the environment by reducing carbon emissions" (Vision and Mission, 2015). Rachel Ginis founded Lilypad Homes after directly experiencing the benefits of an ADU. Finding herself as a single parent, Ginis converted the existing master bedroom of her single-family home into an ADU and rented out the space in order to remain in her home and ensure her daughter could continue to attend her elementary school ("Planning Commission," 2015). Ginis places particular emphasis on the role of women in society of as caretakers of children and aging parents and the importance of having a home that they can afford to carry out these duties. "Women have a tendency to end up with homes, or hold onto their homes in unusual situations; they also end up being the caretakers of their partners, so this gives them options and empowerment" ("Planning Commission," 2015).

In her advocacy for the benefits of ADUs, Ginis focuses on attached ADUs, or what she terms "Junior Accessory Dwelling Units (JADUs)" ("Planning Commission,"

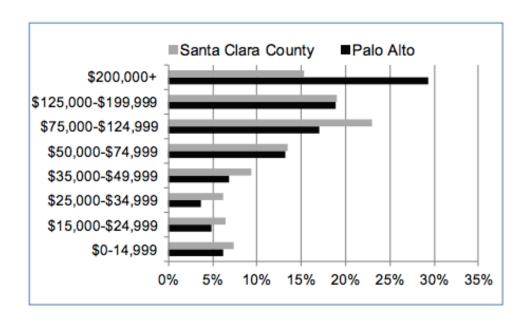
2015; Ginis, 2015). Ginis characterizes JADUs as "the lowest hanging fruits in the housing equation because they have such a low construction cost... as little as \$5,000" (Planning Commission, 2015). Depending on the local zoning ordinance of a particular city, the construction required can be as little as the installation of an exterior entrance and a wet bar ("Planning Commission," 2015).

Palo Alto by the Numbers

An examination of Palo Altos statistics including age distribution, occupation type, household income and real estate values provide context to the ADU discussion especially considering the growing senior population and a low income-earning segment of the population. As of 2013, Palo Alto's population was 66,638 ("Housing Element," 2014). The three largest population categories as of 2010 according to age are 20,300 Child Bearing, (ages 18-44), 18,018 Middle Age (ages 45-64) and 11,006 Senior (age 65+) ("Housing Element," 2014). Palo Alto's senior residents are an especially notable segment of the population as they are considered part of a special needs group ("Housing Element," 2014). Seniors may have serious heath requirements and many are on fixed monthly incomes and are particularly susceptible to increases in cost of living ("Housing Element," 2014). Statistics show that Palo Alto's senior population will continue to rise from an estimated 17 percent of the population as the median age of the population continues to grow older ("Housing Element," 2014). Palo Alto's population is ageing rapidly from a change in median of 29.5 years in 1970 to 41.9 years in 2010 (Cutler, 2015).

A major economic centre, Palo Alto provides approximately 93,900 jobs to the San Francisco Bay Area ("Bay Area Plan," 2013). Almost half (49 percent as of 2012) of

all employed Palo Alto residents work in the Financial and Professional Service sector including software engineers, developers and lawyers ("Housing Element," 2014). The sector employing the next greatest number of Palo Altans is the Health, Education, and Recreation Services sector employing 31 percent of Palo Altans as of 2012 ("Housing Element," 2014). Palo Alto is the birthplace of technology powerhouse Hewlett-Packard and home to offices of renowned companies like Amazon.com, VMware, Genencor, SAP, Space Systems/Loral and Tesla Motors ("Housing Element," 2014). The Stanford



Household Income Distribution, 2012 (Housing Element, 2014).

Research Park serves as a major research and office centre, and a cluster of venture capitalist firms have offices on Sand Hill Road ("Housing Element," 2014).

Unsurprisingly, Palo Alto serves as home to many multi-million dollar property owners, and at least 8 billionaires (Westervelt, 2013).

According to 2012 statistics approximately 78 percent of Palo Alto households earned moderate or above moderate incomes, and 22 percent earned lower incomes

("Housing Element," 2014). In comparison with Santa Clara County-wide household income statistics, Palo Alto has fewer lower income families at every increment and nearly 50 percent more households earning above moderate incomes. Interestingly, the Palo Alto's comprehensive plan positively reports that the number of households earning less than \$25,000 fell to 11 percent in 2012 from 14 percent in 2000, while the share of the county's low earners rose to 14 percent from 13 percent ("Housing Element," 2014). While it is possible that this 3 percent drop in low income earners can be attributed to a positive change in annual income, it is also possible, and perhaps more likely, that this drop can be explained by residents being priced out of the city and replaced by higher income earners.

Palo Alto is considered a suburban residential community with a vibrant economy in the high technology and medical sectors. Its housing stock provides a number of housing types, including single-family homes, townhomes, condominiums, apartments and the solitary Buena Vista Mobile Home Park that while currently operating, is facing closure (Housing Element, 2014; Kuhri, 2015). As of October 2015 the median home price in Palo Alto was \$2,300,000, an increase of 3.4% over the October 2014 median home price of \$2,225,000 ("Housing Element," 2014; California Home Sales, 2015.) A search of Zillow.com for new rentals of all square footage listed from November 24-28, 2015, revealed an average rental rate of \$4,386 per month (Rental Listings, 2015). According to 2012 data, 56 percent of all Palo Altans own their homes and earn a median household income of \$161,906 ("Housing Element," 2014). Renters make up the remaining 44 percent of residents earning median household income of \$79,426 ("Housing Element," 2014). Households that allocate 30% or more of their household

income toward lodging (including utilities), are considered "cost burdened" ("Housing Element," 2014). In 2010, 28 percent of all Palo Alto households were cost burdened including 33 percent of all renters and 24 percent of homeowners ("Housing Element," 2014).

Palo Alto's People and Politics

In his book Winslow (1993) suggests: "Readers who envision progress as an evolutionary spark that periodically circles around to revisit issues, and sometimes needs new lift to regain or maintain its upward thrust, will find ample evidence in Palo Alto-Stanford history to support their view" (p. 5). Indeed, the ideological lines that were drawn in the 1960's are generally the same in Palo Alto today with residents and city council members either falling into the balanced growth or the residentialist slow growth approach to city planning. Ideologically, city council is now considered almost evenly split, with five council members known as residentialists and four considered growth advocates (personal communication, July 30, 2015). The views of each camp are broadly represented amongst two vocal community organizations - Palo Altans for Sensible Zoning (PASZ) and Palo Alto Forward (PAF). PASZ formed in 2013 and advocates for the preservation of a family-oriented Palo Alto and prioritizes quality of life over industry ("PASZ," 2015). PASZ's stated goals include improving traffic, promoting moderate density, establishing a city, improving schools and protecting green space ("PASZ," 2015).

PAF is a relatively new organization having formed in after like-minded community members met at a city council meeting on August 4, 2014 (Sheyner, 2014a). The discussion of growth in the context of the comprehensive plan update was on the

agenda and frustrated with anti-growth attitudes, dozens of outspoken residents showed up (Sheyner, 2014a). Local media noted this particular meeting as a turning point for changing the nature of typical city planning discussion to focus on the serious implications of Palo Alto's housing shortage (Sheyner, 2014a). PAF stands for thoughtfully executed development projects and improved public transit infrastructure that will accommodate the city's growth ("Our Platform," 2015). PAF is especially focused on the jobs to housing imbalance and the general dearth of affordable housing options ("Our Platform," 2015).

Differences notwithstanding, there are some shared values amongst both groups. Residentialist council member (and PASZ member) Tom Dubois points to a shared belief in the importance of improving the city's public transportation system (personal communication, July 30, 2015). Council member Cory Wolbach (and PAF member), a growth advocate, shares several residentialist concerns with high traffic, limited parking, achieving quality design and architecture, a community-led planning process and a solid social and physical infrastructure (personal communication, August 14, 2015). City council on the whole also seems wary of challenging the fifty-foot height limit established in the 1970's (Winslow, 1993). Residentialists typically believe it to be an effective zoning restriction that constituents want to see preserved while growth advocates identify it as low priority on a list of many battles (personal communication, July 30, 2015; personal communication, August 14, 2015).

No matter what a Palo Altan's perspective is on city planning be it residentialist or pro-growth in nature, the anticipation and acceptance of change demonstrates a prudent understanding that over time economic forces change, population patterns shift

and a city must adapt. By nature humans are sentimental creatures and tend to recall certain stages of their lives with particular reverence, the good old days. In a 1969 video interview with Frederick Terman celebrating Palo Alto's 75th anniversary, Terman was asked whether he felt that industrialization was overtaking the city's charm ("Fred Terman Interview," 1969). His response was particularly poignant in its applicability to the city's cyclical planning debates, both past and present:

Well there is definitely lots of complaints about things and objections to changes and the like. But the interesting thing, you find that particularly in the last 25 years when this growth and changes have come about, you'll find that in that period, the people who came to Palo Alto, irrespective of when they came, always like the town the way it was when they arrived. If they came here 20 years ago, they loved the Palo Alto at that time and they complain about the changes and the increased traffic and more land being built on and so on. If they came here 5, or 8, or 10 years ago, they like it that way. They are perfectly content and the fact that each new group of you might say, immigrants that come here and settle down in Palo Alto, liked the town the way it was when they arrived, even if they only arrived fairly recently. It means that it can't all be bad ("Fred Terman Interview," 1969).

Whatever the planning debate, Palo Altans care deeply. According to Palo Alto city planner Jeremy Dennis, strong community involvement is the city's strength providing a set of resources that many other cities do not have: its people (personal communication, August 19, 2015).

A Hierarchy of Planning Policy

An examination of the state, county and city planning policy framework is instrumental in understanding how Palo Alto currently addresses the provision of its housing in general and how it specifically considers the status of ADUs. While the majority of planning decisions are made at the local level, the City of Palo Alto's planning policy framework is directly informed by requirements set out by the State of California.

National level.

The basic foundation for planning and zoning in the U.S. was laid in 1920's by two standard state enabling acts ("Standard Enabling Acts," 2015). Before he became President, Herbert Hoover was the Secretary of Commerce (Knack et al, 1996). Driven by an interest in business and improving prospects for the poor, Hoover determined that he could most effectively impact these areas through housing (Knack et al, 1996). Hoover went on to steer the development of the two statutes that effectively govern the American planning system. The Standard Zoning Enabling Act (SZEA), 1926 provided a grant of power and a provision that the legislative body could divide the local government's territory into districts and create a map detailing the potential uses and development of each land parcel ("Standard Enabling Acts," 2015; Schleicher, 2013). The Standard City Planning Act (SCPEA), 1928 addressed the nuances of the city's planning regime including the establishment of a planning commission to prepare and adopt a master plan and the required content of that plan ("Standard Enabling Acts," 2015).

State level.

Under California state law, all local governments are required to adopt a comprehensive, long-term general plan to address the future growth and development of their city ("California/U.S. Department," 2015). Within a local general plan is the housing element, one of the seven mandated sections of the General Plan ("California/U.S. Department," 2015). Enacted in 1969, the housing element law demonstrates how a city plans for the private market to meet the existing and projected housing needs of its residents ("ABAG Planning: Housing Elements," 2015). The housing element includes land use plans and regulatory systems and provides opportunities for housing development ("ABAG Planning: Housing Elements," 2015).

California is one of a few number of states whose coalition of government and metropolitan planning organization (in California, ABAG and the Metropolitan Transportation Commission (MTO) respectively) are separate entities (Dawid, 2015). This may soon change as a merger as ABAG currently studies a merger proposal (Dawid, 2015). The two organizations have long worked together closely given symbiotic relationship between housing and transportation (McGall, 2015). How a merger might affect the course of affordable housing supply and ADUs in Palo Alto is only speculation. However, two potential scenarios might be considered: a merger might mean less dedicated attention to affordable housing issues considering the much larger MTO (in size and budget) may continue to focus primarily on transportation issues. Or perhaps with an increased budget allowing for more resources, affordable housing issues in the Bay Area could be more effectively addressed. A timeframe of a potential merger and any associated details have yet to be released.

The Regional Housing Needs Allocation.

The state also prescribes a city's affordable housing targets via the California Department of Housing and Community Development (HDC), which are referred to as the Regional Housing Needs Allocation (RHNA) ("California Department of Housing," 2015). The RHNA is calculated primarily based upon population projections provided by the California Department of Finance (DOF), household formation rate and vacancy rate projections prepared by the HCD and consultations with regional planning agencies (Levy, 2015). The RHNA is administered by the Association of Bay Area Governments (ABAG) under the *Plan Bay Area*, a long-range integrated plan that also addresses transportation and land use ("ABAG: Who We Are," 2015). ABAG is a collaborative administrative body that manages the shared, long-range, economic, social, and environmental challenges of San Francisco Bay Area governments, spanning nine counties ("ABAG: Who We Are," 2015; McGall, 2015). RHNA targets are based on eight-year cycles, the current cycle being 2014-2022 ("ABAG Planning: Regional Housing," 2015). ABAG has determined 187,000 new housing units are required in the Bay Area and has proportionately allocated a share of these units to each local government ("ABAG Planning: Regional Housing," 2015).

Palo Alto's share of the RHNA is 1,988 housing units, which are required for the 2014-2022 planning period ("Housing Element," 2014). The 1,988 housing units are categorized as follows: 691 units to be for extremely low/very low income households, 336 units to be for low income households, 246 units to be for moderate income households and 243 to be for above moderate income units.

Palo Alto is not required to physically build each housing unit, but rather demonstrate the capacity to absorb each unit by providing zoning opportunities within the city that would permit at least the assigned 1,988 sites. It is important to note that the RHNA is "a planning target, not a building quota" ("Housing Element," 2014). Accordingly, the city is not penalized for falling short of its RHNA goals but any shortfall is carried over into future ABAG planning cycles ("Housing Element," 2014).

The methodology to determine each government's local RHNA is largely based on the "fair share component" which considers population growth and job location and is meant to prevent any one jurisdiction from shouldering an unfair amount of the RHNA ("ABAG Planning: RHNA Methodology," 2015). The RHNA allocation methodology is not without its critics. Some claim that Palo Alto has had been saddled with a disproportionate number of RHNA housing units assigned because of the number of jobs located in the city (Thorp, 2014). These critics would ague that just because a certain number of jobs are located within the city limits of Palo Alto, does not mean every employee must also be able to live in the city (Diamond, 2012). Regardless of whether or not the allocation is objectively fair, the City Palo Alto must comply with allocation not because ABAG has any kind of official authority over the city, but because the HDC reviews all area housing elements for compliance ("California Department of Housing," 2015; Diamond, 2012). If the City of Palo Alto were not to comply, the state could remove key sources of transportation and housing funding (Diamond, 2012).

Proposition 13.

Palo Alto housing supply and affordability are strongly influenced by the existence of Proposition 13, a landmark state law that came into effect in 1978. The legislation represented a strong reaction to the steep rise in housing prices of the 1970's. Between the years of 1971 and 1978 alone, the median price of a California home rose by 164% (2012 Housing Index, 2012). Due to an imbalance between growing assessed property values and ever-increasing property taxes California voters passed Proposition 13 with 65% of the vote (2012 Housing Index, 2012). Joint Venture Silicon Valley dedicated a special analysis to Prop. 13 in 2012 summarizing the two main provisions of the proposition that appealed most to voters: (2012 Housing Index, 2012).

- Lowering the maximum property tax rate to 1 percent—a nearly 60 percent decrease. The purpose of this provision was to lower the property taxes that had recently soared for residents. An additional property tax rate for locally approved bonds was allowed through a later amendment.
 Though there was less public discussion of the implications, Proposition 13 also lowered property taxes for businesses
- Limiting increases in assessed value to a maximum of 2 percent per year as long as the property did not change ownership. The purpose of this provision was to limit future property tax increases and bring a large measure of certainty to taxpayers about their future property tax liability. The certainty about future property tax increases was perceived as a major benefit of Proposition 13 (2012 Housing Index, 2012).

It is also important to note the Prop. 13 effectively transferred all municipal jurisdiction of local property taxation to the state. This means that municipalities and school districts cannot alone seek property tax increases to maintain, improve or expand public services. Any potential change made to Prop. 13, would require a "supermajority", or 2/3 of Californians votes to pass ("2012 Housing Index," 2012).

Now more than 35 years old, the consequences of Prop. 13 have been studied in detail. In particular how Prop. 13 has become a detriment to housing affordability across the Bay Area generally and, accordingly, in Palo Alto. The most apparent negative side effect of Prop. 13 in Palo Alto is that residential property owners pay substantially different property tax amounts on similarly valued properties, depending on the date of purchase ("2012 Housing Index," 2012). The difference in property tax liability between one property and the next despite similar market values and, likely similar household burdens on municipal infrastructure is staggering. To illustrate this disparity I looked for a home currently for sale with a list price close to the estimated median home value during the month of September 2015 in Palo Alto —\$2,479,000 (Palo Alto, CA, 2015). Next I located a similar, previously sold in close proximity to the property currently for sale (Palo Alto CA, 2015). Listed in early August, 2015 for \$2,450,000, 3851 Nathan Way is located in the desirable Adobe Meadow – Meadow Park neighbourhood (Palo Alto CA, 2015). Two doors down is 3863 Nathan Way, a property that last sold in 1997 for \$406,000 (Palo Alto CA, 2015). Supposing 3851 Nathan sells for the list price this year, the new owner's taxes will be assessed at 1% of the purchase price meaning an approximate 2016 tax bill of \$24,500. Back at 3863 Nathan sold in 1997, the property

tax bill for 2014 was \$7,051, or 71% less than the new owner will be paying (Palo Alto CA, 2015).

Proposition 13 has effectively created an inequitable property tax system which unfairly penalizes new buyers and favours long-time owners. While the need for Prop. 13 reform is apparent, change might not be easily obtained. According to Elias (2015) as soon as any proposal arises to change Prop. 13, it is regularly met with loud and wellfunded opposition. To be fair, Prop 13 is not without redeeming qualities. It allows elderly residents on fixed incomes to remain in their homes, while a current value assessment system could eventually drive them out through ever-increasing property taxes and fixed ability to pay. However, suppose an elderly property owner of a singlefamily home that they purchased in the 80's has developed mobility issues and wishes to downsize. Knowing the taxes on a new, smaller property that they would downsize to, would nevertheless be some multiple of the taxes they are paying on their current larger property would create a significant financial barrier to moving. Remaining in place not only affects the quality of life for that elderly resident, it also limits housing supply thereby driving up property values and preventing healthy neighbourhood change. Elias (2015) further argues that even liberal-leaning voters will likely oppose reform actions due to "fear-mongering" claims that any change to Prop. 13 would necessarily lead to the end of their own protections.

In Palo Alto, support for Prop. 13 reform is now being expressed on the record.

In May, 2014, an "Adoption of a Resolution Supporting Proposition 13 Reform" came before Palo Alto City Council (Adoption, 2014). In an 8-1 vote in favour, Palo Alto joined a growing list of cities in favour of reforming Proposition 13 (Sheyner, 2014b). At

the council meeting council members voiced their support for the resolution especially the imbalance amongst commercial and residential share of the state property tax revenue (Sheyner, 2014b). Only 28% of property taxes are collected from commercial operations with the balance shouldered by residential property owners (Adoption, 2014). Council member Larry Klein (now former) focused on the lack of fairness amongst long-time property owners and new purchasers saying that a young family who may wish to buy a house next to his would face triple or more the amount of property taxes that he pays (Sheyner, 2014b). Klein further argued of the proposition "it creates a lack of diversity in our community" (as cited in Sheyner, 2014b).

While municipal-level support of Prop. 13 reform may be growing across California, recent comments made by Governor Jerry Brown at a real estate industry conference suggest he is not enthusiastic about potential reform. Gov. Brown focused on the topic of reform as it relates to commercial interests stating "I'm not supporting a split roll" (Brown, 2015). A "split roll" would mean commercial properties would be assed based on current property value rather instead of 1% of the purchase price according to Prop. 13 (Elias, 2015). A reassessment of commercial properties would mean an estimated \$6-12 billion more in annual state taxes (Elias, 2015). While his stance on reforming the commercial dimension of Prop. 13 may be discouraging, it does not preclude Gov. Brown from agreeing that the tax burden amongst residential owners is being unfairly shouldered by newer buyers and exacerbating affordability in the Bay Area. Regardless of Gov. Brown's position, it would take a 2/3 vote on behalf of both the state senate and assembly in favour of a reform to place it on the ballot, followed by the necessary 2/3 vote of Californians (Elias, 2015). Given the lengthy and highly

politicized nature of the legislative process, it may be some time before Prop. 13 amendments are ever realized.

ADUs and state law.

The state also gives direct consideration to ADUs and has enacted several different laws starting with the Second Unit Law of 1982 (Antoninetti, 2008). The law legalized attached and detached ADUs in both single-family and multi-family zoned areas which would have forced municipalities to adopt local ADU ordinances (Antoninetti, 2008). However, many local governments took advantage of a provision in the law. City councils had the discretionary power to impose conditional use permitting which required a review by city council or public hearing (Antoninetti, 2008).

According to Brinig and Garnett (2013), the vigorous state-level efforts of the early 2000's to improve ADU legislation were to ensure a "minimal level of local parochialism". Thus, in an attempt to address the restrictive municipal interpretations of the Second Unit Law, the California legislature passed Assembly Bill 1866 in 2002 (Antoninetti, 2008; Brinig and Garnett, 2013). Assembly Bill 1866 effectively removed the discretionary power of municipalities mandating they "amend their zoning laws to permit ADUs in single-family zones, accept the imposition of a state-dictated regulatory regime, or demonstrate why they cannot conform to the state mandate" (Brinig and Garnett, 2013). The removal of this discretionary power proved unpopular in many municipalities. In 2002 the office of the City Attorney of Palo Alto expressed disdain for a law that "forbids cities from exercising discretion or from gathering neighborhood comments through a hearing before issuing a permit" (as cited in Antoninetti 2008, p. 357). Municipalities simply found another way to maintain strict local control over ADU

construction by highly detailed ordinances calling for burdensome lot to building-size ratios, minimum floor area ratios, property line setbacks, height restrictions and parking requirements (Antoninetti, 2008). As was the case with the Second Unit Law, Assembly Bill 1866 did little to spur ADU construction (Antoninetti, 2008).

One year later, Assembly Bill 2702 represented another attempt to add more teeth to ADU legislation and further limit regulatory barriers at the municipal level (Antoninetti, 2008). Among other permissive requirements, the bill allowed for the construction of ADUs on any existing lot zoned as residential and instructed that municipalities could not impose any additional standards above and beyond those already required for the primary residential units (Bill Text, 2015). It also made the option to rent both primary and ancillary units erected on the same lot legal and prohibited a municipality from regulating or prohibiting the use of an ADU as a rental property (Bill Text, 2015). Assembly Bill 2702 succeeded in both legislative houses and was well on its way to changing the nature of municipal ADU ordinances when Governor Arnold Schwarzenegger vetoed it citing his commitment to limiting "top-down bureaucracy" (Antoninetti, 2008).

A note on the American zoning system.

The American zoning system is known to generally be "Euclidean" and broadly based upon a separation of defined uses. The main benefit of a Euclidean system is its clarity – if a particular use does not conform to the code it is not permitted ("Types of Zoning," 2001). The benefit of clarity is also a disadvantage however, when it coincides with inflexibility and an inability to address exceptional site characteristics and special circumstances ("Types of Zoning," 2001). The opposite of a Euclidean system is a

Flexible Zoning system, which allows for more subjective interpretation of each unique site ("Types of Zoning," 2001). The term "Euclidean" emerged from *Village of Euclid v*. *Ambler Realty Co.*, a 1926 landmark Supreme Court case that established the primacy of city and town zoning ordinances ("Encyclopedia of Cleveland History," 2015). The town of Euclid, Ohio had enacted a zoning ordinance separating all town land into six classes of use districts ("Village of Euclid," 2015). Ambler Realty argued that the ordinance would affect the value of their 68-acre tract of land, which fell into three classes of use districts ("Village of Euclid," 2015). The court sided with Euclid holding that the zoning ordinance was enforceable for reasons of public welfare due to the possibility of nuisance caused by a mixing of uses ("Village of Euclid," 2015).

In his written opinion Justice J. Sutherland explained:

Thus, the question whether the power exists to forbid the erection of a building of a particular kind or for a particular use, like the question whether a particular thing is a nuisance, is to be determined not by an abstract consideration of the building or of the thing considered apart, but by considering it in connection with the circumstances and the locality. A nuisance may be merely a right thing in the wrong place -- like a pig in the parlor instead of the barnyard (Village of Euclid, 2015).

The *Euclid v. Ambler* decision has served an effective litmus test for the suitability of a zoning ordinance in the decades since. An ordinance is generally upheld as long as its goals serve the public good (health, safety and general welfare), and the restrictions it imposes have a strong relationship to those goals (Pollack, 1994). In effect, the ordinance can be neither arbitrary nor unreasonable (Pollack, 1994). Given the vast

landmass of the United States, many early settlers had the ability to reside on large plots of land, which over time has fostered a culture that values space and privacy, resulting in non-contiguous and non-compact land use patterns (Kushner, 2003). Euclidean zoning has found a formidable bedfellow in the (still) persistent "American dream" in that many feel that they have not truly 'made it' until they have a little piece of land to call their own. Across the United States there exists a general reverence for, and persistent protection of land zoned for single-family dwellings (Pollack, 1994). Palo Alto is no exception to this rule.

Palo Alto planning framework.

Like all regional planning agencies, Palo Alto is required by the State to have a general plan (in Palo Alto called a comprehensive plan), including a housing element. Both documents have critical bearing on the extent that ADUs may be used as a tool to address housing supply and affordability. Palo Alto's latest Comprehensive Plan was adopted in 1989 with the goal of guiding the city's planning process until 2010 (Sheyner, 2015b). The city is now reviewing and updating the comprehensive plan to "ensure the sufficient public services are available to serve new housing development and that sufficient land for neighborhood-serving retail uses is preserved" (Comprehensive Plan, 2015;). Given the increasing development pressures and accompanying traffic and parking issues, city staff have established a "continuum of engagement" seeking public input through methods such as online surveys and community meetings to help inform the comprehensive plan update. A Citizen's Advisory Committee of 22 community members appointed by the City Manager also meets once per month (Citizen's Advisory, 2015). The committee reviews assists city staff by reviewing public feedback and

working through different sections of the comprehensive plan and proposing revisions (Citizen's Advisory, 2015). The purview of the updated comprehensive plan will extend through to 2030 and finalization of the plan by Palo Alto's city council is expected in 2016 (Our Palo Alto, 2015; E. Uang, personal communication, July 20, 2015).

The comprehensive plan and ADUs.

In examining ADUs in Palo Alto, the two most applicable sections of the comprehensive plan are *Chapter 2 – Land Use and Design* and *Chapter 4 – The Housing Element 2015-2023*. The Land Use and Design chapter lays establishes a "constitution" guiding the development of public and private property (as quoted in (as quoted in Land Use and Design, 2007). Further, this chapter provides the context in which local planning decisions are made, and sets goals and outlines policies, and programs the cover growth and development n Palo Alto (Land Use and Design, 2007). This chapter only mentions ADUs in broader-based terms, expressing in Policy L-13 the intention to evaluate diverse forms of housing that increase density including second units in single-family neighbourhoods (Land Use and Design, 2007). Program L-13 establishes the intent to develop design guidelines for second units that are compatible with single-family neighbourhoods (Land Use and Design, 2007).

Palo Alto's housing element is where we find substantive material addressing ADUs (referred to therein as "second dwelling units"). The housing element identifies ADUs as a way to "expand affordable housing opportunities" and indeed, has earmarked 32 units to be counted against the RHNA requirement for 246 moderate-income units. The housing element identifies two specific programs dedicated to ADUs: H1.1.2 which looks to legitimize existing non-conforming ADUs that do not meet current zoning

standards and H3.3.5 which exists to examine modifications to development standards to facilitate and encourage residents to build ADUs ("Housing Element," 2014). During the last planning cycle of 2007-2014, program H1.1.2 intended to investigate establishing an amnesty program existing illegal ADUs that fit with the character and quality of the neighbourhood and met minimum housing code standards. The program was never launched and is marked for consideration during the 2015-2023 planning cycle ("Housing Element," 2014). The applicability of program H3.3.5 for the generation of ADUs is more general in nature endeavouring to support the development and preservation of homes and living facilities for persons with special housing needs via assisting local agencies and not-for-profit organizations who develop such facilities ("Housing Element," 2014). However, based on a Regional Housing Mandate Committee Staff Report released in mid 2014, prior to the *Housing Element 2015-2023*, it would appear that city staff intended to use the program to encourage the development of ADUs (2015-2023 HE Admin., 2014). The report notes the inclusion of program H.3.3.5 in the forthcoming housing element update as for the purpose of increasing second unit production to the number of needed housing units required by the RHNA (2015-2023 HE Admin., 2014).

The Palo Alto zoning code.

True to American tradition, Palo Alto's zoning system is primarily Euclidean, proscriptive and based on a strict separation of uses (Types of Zoning 2001). Within Palo Alto's zoning code is where specific ADU development requirements are definitively laid out. The City of Palo Alto adopted its first zoning code in 1922, where eight zoning districts were established (Brief History, 2007). In 1951 the zoning code was updated

and the eight zoning districts expanded to twelve (Brief History, 2007). In 1978 the city adopted an updated comprehensive plan, which introduced significant changes to the zoning code in the name of protecting existing "desirable" development (Brief History, 2007). At the time the city was already considered to be largely built-out and the zoning code was further expanded to help preserve the maintenance and quality of specific neighbourhoods (Brief History, 2007).

From 1978 and on, the zoning code underwent amendments that imbued the oftconflicting mores of Palo Altans over time (Brief History, 2007). In 1983 the Two Unit Multiple-Family Residence District (RMD) was added to the zoning code (Brief History, 2007). This amendment permitted the development of an ADU under the same ownership of the already existing dwelling with the goal of encouraging more housing opportunities without the need to demolish existing smaller dwellings (Brief History, 2007). Two months later after an influx of building permit applications, city council placed a six-month ban on the issuance of building permits for ADUs greater than 1,000 square feet in the Single-family (R-1) District (Brief History, 2007). The ban was inspired by concern over maintaining the general low-density character of the R-1 neighbourhoods (Brief History, 2007). Soon another amendment was made to the zoning code making the development of ADUs in the R-1 district conditional upon very specific conditions. The current version of the zoning code lays out the requirements for both attached and attached ADUs (Title 18 Zoning Code, 2015). For attached ADUs, the area of the lot must be 35% larger than the minimum lot size allowed in the district, the ADU must be separated from the main dwelling by a distance of 12 feet, and is limited to an

area of 900 square feet and a 17 foot height limit (Brief History, 2007). The application of the *Title 18 Zoning Code* (2015) lot size requirements for ADUs can be seen below:

District and Minimum Lot Size	Minimum Lot Size to add an ADU (all lots except flag lots*)	Minimum Lot Size (flag lots)
R-1 (6,000)	8,100 square feet (sf)	9,720 sf
R-1 (7,000)	9,450 sf	11,340 sf
R-1 (8,000)	10,800 sf	12,960 sf
R-1 (10,000)	13,500 sf	16,200 sf
R-1 (20,000)	27,000 sf	32,400 sf

Minimum lot sizes for second dwelling units (Title 18 Zoning Code, 2015).

Exclusive of any portion of the lot used for access to the street

For attached ADUs, the lot size requirements are the same, however the ADU is limited to an area of 450 square feet (*Title 18 Zoning Code*, 2015). Both attached and detached ADUs are subject to strict parking requirements which alone, often prove to be prohibitive to those interested in building an ADU: 1) two separate parking spaces are required for the ADU (at least one of the spaces must be covered) and 2) parking must be located outside of the required front setbacks and no closer than 10 feet from the street in a street side setback (*Title 18 Zoning Code*, 2015). The ADU parking requirements are above and beyond the two parking spaces (one covered) already required for the R-1 main dwelling (*Title 18 Zoning Code*, 2015). Below are examples of parking planning options for ADUs included in the Zoning Ordinance Technical Manual for Single-Family Residential Zones (2006):

^{* &}quot;Flag lot" means an interior lot that is either a landlocked parcel which has a driveway easement across another lot abutting a street, or a lot having limited frontage providing only enough width for a driveway to reach the buildable area of the lot which is located behind another lot abutting a street

Detached 2nd-dwelling units & associated parking site planning

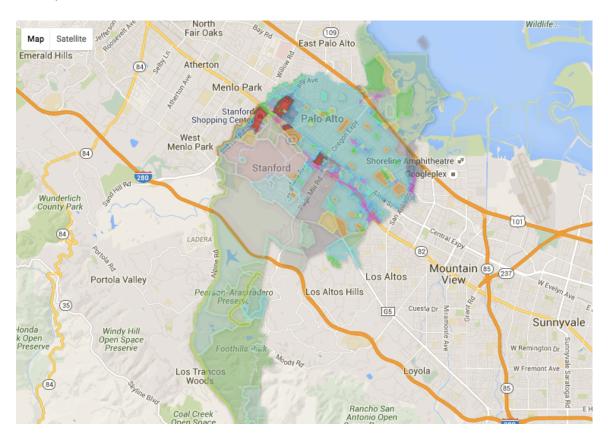
Fig 41 Examples of site planning solutions for detached 2nd dwelling units and associated required parking

A Detached & separe dwelling parking B Attached & separat dwelling parking parking that is attached to r ng parking Main dwelling has a 1-car attached Main dwelling has 1-car attached garage. · Both dwellings share a 2-car detached garage. (Because it is detached and at least 75' from the front lot line, it may be Both dwellings share a 2-car attached · 2nd dwelling has a 1-car attached cause attached, it must be 2nd dwelling has a 1-car detached garage. (Be garage. located in the rear and side yards.) garage. (Because it is detached and at located with the building area rather than Both dwellings use the driveway for their least 75' from the front lot line, it may be in the rear or side yards). Both dwellings use the driveway for their respective uncovered spaces (beyond located in the rear and side yards.) respective uncovered spaces (beyond front setback) · Both dwellings use driveway for their front setback) · Both dwellings use driveway for their uncovered spaces (beyond front setback) uncovered spaces (beyond front setback) Interior lot example Rear yard Curb Lot line Sidewalk

Proposed Parking Site Planning for properties with and ADU (Zoning Ordinance, 2006).

While the current Palo Alto zoning code permits ADUs in the R-1, R-2/RE and RMD zoned districts, the R-1 district is by far the largest, representing 81% of Palo Alto's lots, or 14,400 of 17,700 lots ("Analysis of the Use," 2014). Based on zoning requirements approximately 22%, or 3,168 of R-1 lots meet the minimum zoning requirements for ADU development. Of these 3,168 eligible lots, the city does not have any record of how many already have an existing ADU, be it legal or non-conforming ("Housing Element," 2014). Similarly, it is unknown how many property owners have already maxed out the FAR permitted for the lot size with the main dwelling ("Housing Element," 2014). Eligibility of R-1 lots aside, the middling number of ADUs built annually when compared against highly lucrative rent opportunities due to a shortage of

housing suggests that the ADU development zoning requirements have proven excessively restrictive. The city estimates that on average only four ADUs are built each year ("Housing Element," 2014). In 2005 the city came close to relaxing the zoning ordinance to allow single-family home owners with lots 7,000 square feet or larger to build a 450 square foot ADU, thereby reducing the minimum lot requirement by 1,100 square feet (Sheyner, 2015a). The amendment also included a cap of 15 units per year (Sheyner, 2015a). Ultimately the proposal was defeated in a 5-4 vote owing to concerned residents who feared the new ADUs would generate noise and increase traffic (Sheyner, 2015a).



Palo Alto's R1 Zoning District appears in sea blue colour and can be seen sandwiched between routes 101 and 82 with an additional small segment southeast of route 82 bordering the City of Los Altos (Palo Alto Land Use, 2015).

A Future for ADUs

When is comes to city council member attitudes towards the promotion of ADUs in Palo Alto, attitudes range from hesitant to enthusiastic. Residentialist council member Tom Dubois has raised the importance of preserving neighbourhood privacy and expressed concern over how to address existing non-conforming ADUs (personal communication, July 30, 2015). According to Dubois, the draft comprehensive plan currently includes a proposed amnesty program to grandfather in non-conforming ADUs, but with no data on the number and state of the non-confirming units, the city might be getting involved with a complicated situation (personal communication, July 30, 2015). Pro-growth council member Cory Wolbach believes current ADU zoning requirements to be overly ownerous, particularly the setback and parking requirements and the lot size minimums and the floor-area ratio maximums traffic (personal communication, August 19, 2015). Wolbach believes carve-out units to be the most promising form of ADU for Palo Alto since no new density area is added to the lot (personal communication, August 19, 2015). Palo Alto Forward (PAF) is the most outspoken in its support of ADUs. They have hosted an ADU brainstorming session and include a variety of detailed ADU information and resources on their web site ("Our Platform," 2015). PAF co-founder Kate Downing simply states "we support all forms of housing, any housing we can get" and have provided (personal communication, July 20, 2015). City planner Jeremy Dennis acknowledged the potential for ADUs to allow serious to age in place and the potential increase to the housing stock but noted the there are potential challenges including a possible increase in traffic (personal communication, August 19, 2015).

Recent city council activity has indicated that time for ADUs to be considered a viable affordable housing may be fast-approaching. In October a "colleague's memo" prepared by Vice Mayor Greg Schmid and council members Greg Scharff and Cory Wolbach was circulated amongst council, recommended that city planning staff and the Planning and Transportation Commission begin a review of the city's current laws on ADUs (Sheyner, 2015a). The next step after a colleague's memo is released is for it to be placed on the council agenda and will ideally proceeds to a motion from there (personal communication, August 14, 2015). While the last 2005 attempt to relax ADU requirements fizzled during a council vote due to residentialist pressure, since then, public discourse surrounding Palo Alto's housing challenges has become more even between the dominant ideologies. Hopefully are more even representation of perspectives will lead to productive action on behalf of city council to address affordable housing issues.

Conclusion

Palo Alto was built upon has a rich history and today offers one of the best school districts in the country, an Ivy League university, a plethora of open area nature preserves and serves as the innovation capital in the world; to those who can afford it. Palo Alto has become so economically successful and such a desirable place to live that it as become accessible only to wealthy. Palo Alto urgently needs more affordable housing. With a willing city council directed by progressive constituents, the city can soon begin to ease its affordability burden. ADUs can offer Palo Alto the ability to house more people through gentle intensification and adapt with the needs of varying generations so

that the city may transform itself into a more affordable, diverse, vibrant and liveable city.

References

- 2015-2023 Housing Element City of Palo Alto. (2014, July 7). Retrieved from http://www.cityofpaloalto.org/civicax/filebank/documents/37935
- ABAG Planning: Housing Elements. (n.d.). Retrieved October 23, 2015, from http://abag.ca.gov/planning/housing/elements.html
- ABAG Planning: Regional Housing Need Allocation (RHNA). (n.d.). Retrieved October 22, 2015, from http://www.abag.ca.gov/planning/housingneeds/
- Adoption of a Resolution Supporting Proposition 13 Reform. (2014, May 12). Retrieved from https://www.cityofpaloalto.org/civicax/filebank/documents/40319
- Antoninetti, M. (2008). The Difficult History of Ancillary Units: The Obstacles and Potential Opportunities to Increase the Heterogeneity of Neighborhoods and the Flexibility of Households in the United States, 22(4), 348–375.
- Auletta, K. (2012, April 30). Get Rich U. *The New Yorker*. Retrieved from http://www.newyorker.com/magazine/2012/04/30/get-rich-u
- Baron Pollak, P. (1994). Rethinking Zoning to Accommodate the Elderly in Single Family Housing, 60(4), 521–531.
- Bay Area Plan: Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area 2013-2040. (2013, July 18). Retrieved from http://files.mtc.ca.gov.s3.amazonaws.com/pdf/Plan_Bay_Area_FINAL/pbafinal/index.html
- Bill Text AB-2702 Housing: 2nd units. (n.d.). Retrieved November 9, 2015, from http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200320040AB 2702

- Brief History of the City of Palo Alto Zoning Ordinance City of Palo Alto. (2007,

 December 10). Retrieved November 21, 2015, from

 http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=873&TargetID=23
- Brinig, M. F., & Gamett, N. S. (2013). A room of one's own? Accessory dwelling unit reforms and local parochialism. *The Urban Lawyer*, 45(3), 519+.
- Brown, Jerry, Governor. (2015, October 6). Leading from the Top: A Conversation with Governor Jerry Brown.
- California Department of Housing and Community Development (HCD). (n.d.).

 Retrieved October 22, 2015, from http://www.hcd.ca.gov/housing-policy-development/housing-resource-center/plan/he/
- California/U.S. Department of Housing and Urban Development (HUD). (n.d.).

 Retrieved May 18, 2015, from

 http://portal.hud.gov/hudportal/HUD?src=/states/california
- Citizens Advisory Committee | Our Palo Alto 2030. (n.d.). Retrieved November 22, 2015, from http://www.paloaltocompplan.org/get-involved/citizens-advisory-committee/
- City of Palo Alto. (2014). Analysis of the Use of Residential Second Units to Satisfy the

 City's Regional Housing Needs Allocation for the 2015-2022 Housing Element

 (Committee Staff Report No. 4551). Retrieved from

 http://www.cityofpaloalto.org/civicax/filebank/documents/39307
- Cobb, R. L., & Dvorak, S. (2000). Accessory Dwelling Units: Model State Act and Local Ordinance. Retrieved June 20, 2015, from

- http://assets.aarp.org/rgcenter/consume/d17158_dwell.pdf
- Comprehensive Plan and Comprehensive Plan Update City of Palo Alto. (n.d.).

 Retrieved November 16, 2015, from

 http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=654&TargetID=24
- Corelogic. (2015). *California Home Sale Activity by City*. Retrieved from http://www.corelogic.com/downloadable-docs/dq-news/ca-city-october-2015.pdf
- Cutler, K.-M. (2015, January 10). East Of Palo Alto's Eden: Race And The Formation Of Silicon Valley. Retrieved from http://social.techcrunch.com/2015/01/10/east-of-palo-altos-eden/
- Dawid, I. (2015, November 2). Regional Planning Merger One Step Closer to Reality in the Bay Area. Retrieved November 5, 2015, from http://www.planetizen.com/node/81957/regional-planning-merger-one-step-closer-reality-bay-area
- Day, L. (2000). Choosing a House: The Relationship between Dwelling Type, Perception of Privacy and Residential Satisfaction. *Journal of Planning Education and Research*, 19(3), 265–275.
- Diamond, D. (2012, November 14). Palo Alto and other cities shouldn't let regional agency dictate how many homes to produce. Retrieved October 24, 2015, from http://www.mercurynews.com/opinion/ci_21999376/palo-alto-and-other-cities-shouldnt-let-regional
- Elias, T. D., & News, L. A. D. (n.d.). Prop. 13 split-roll vote very much in doubt: Thomas Elias. Retrieved November 5, 2015, from

- http://www.dailynews.com/opinion/20150629/prop-13-split-roll-vote-very-much-in-doubt-thomas-elias
- Encyclopedia of Cleveland History: VILLAGE OF EUCLID V. AMBLER REALTY

 CO. (n.d.). Retrieved November 3, 2015, from

 http://ech.case.edu/cgi/article.pl?id=VOEVARC
- Fairfax Planning Commission Meeting September 17, 2015. (2015). Retrieved from http://www.town-of-fairfax.org/recordings/2015/plancomm/plancomm_broadcast_091715.html
- Fischel, William A. (2005). The Homevoter Hypothesis: How Home Values Influence

 Local Government Taxation, School Finance, and Land-Use Policies. Cambridge,

 Mass.; London: Harvard University Press.
- Foster, S. R. (2006, December). The city as an ecological space: social capital and urban land use. *Notre Dame Law Review*, 82(2), 527–582.
- Fred Terman Interview, 1969. (1969). Palo Alto Historical Association. Retrieved from https://www.youtube.com/watch?v=Jwk2Y4mi87w&feature=youtu.be
- Gillmor, S. C. (2004). Fred Terman at Stanford: Building a Discipline, a University, and Silicon Valley. Stanford, CA: Stanford University Press.
- Infranca, J. (2014). Housing Changing Households: Regulatory Challenges for Micro-Units and Accessory Dwelling Units. *Stanford Law & Policy Review*, 25, 53.
- Joan Grimm & Rita Haberman's ADU: Carving-Out a Studio. (n.d.). Retrieved from http://accessorydwellings.org/2015/05/25/joan-grimm-rita-habermans-adu-carving-out-a-studio/
- JSU Model Ordinance. (2015). Retrieved from http://lilypadhomes.org/jsu-model-

ordinance/

- Knack, R., Meck, S., & Stollman, I. (1996, February). The Real Story Behind theStandard Planning and Zoning Acts of 1920s,. *Land Use & Zoning Digest*.Retrieved from https://www.planning.org/growingsmart/pdf/LULZDFeb96.pdf
- Koch, W. (2011, August 17). A house divided helps pay the bills. Retrieved June 18, 2015, from http://www.usatoday.com/MONEY/usaedition/2011-08-18-housesplitting10-CV-------With- CV U.htm
- Kushner, J. A. (2003). Smart growth, New Urbanism and diversity: progressive planning movements in America and their impact on poor and minority ethnic populations.

 UCLA Journal of Environmental Law & Policy, 21(1), 45+.
- Macht, W. (n.d.). Rethinking Private Accessory Dwellings. Retrieved May 19, 2015, from http://urbanland.uli.org/planning-design/rethinking-private-accessory-dwellings/
- McGall, A. (2015, October 31). Bay Area regional planning agencies to merge. Retrieved November 5, 2015, from http://www.contracostatimes.com/breaking-news/ci_29037724/bay-area-regional-planning-agencies-merge
- Norman, M. (2015). Designing Affordability: Developing New Ecosystems for Equitable Housing Provision. *The 2015 Harvard Journal of Real Estate*. Retrieved from http://reai.harvard.edu/news/innovation-practice-2015-harvard-journal-real-estate
- Our Platform. (2015). Retrieved November 30, 2015, from http://www.paloaltoforward.com/our_platform
- Palo Altans for Sensible Zoning. (2015). Retrieved November 30, 2015, from http://www.paszaction.com/vision

- Palo Alto CA Home Prices & Home Values. (n.d.). Retrieved November 15, 2015, from http://www.zillow.com/palo-alto-ca/home-values/
- Palo Alto Comprehensive Plan: Chapter 2 Land Use and Design. (2007, July 17).

 Retrieved from http://www.cityofpaloalto.org/civicax/filebank/documents/8170
- Palo Alto Comprehensive Plan: Chapter 4 Housing Element 2015-2023. (2007, July 17). Retrieved from http://www.cityofpaloalto.org/civicax/filebank/documents/37935
- Palo Alto Land Use Designations Google Fusion Tables. (n.d.). Retrieved November 23, 2015, from
 - https://www.google.com/fusiontables/DataSource?docid=1ZhRGXMAWNpdBOjvSOr7mZusV2c0pHTCB49JiCRY#map:id=3
- Palo Alto Municipal Code, 5345 Title 18 Zoning (1978). Retrieved from http://library.amlegal.com/nxt/gateway.dll/California/paloalto_ca/paloaltomunicip alcode?f=templates\$fn=default.htm\$3.0\$vid=amlegal:paloalto_ca
- Porfolio. (2013). Retrieved November 26, 2015, from http://www.s2builders.com/
- Process | Our Palo Alto 2030. (n.d.). Retrieved November 16, 2015, from http://www.paloaltocompplan.org/about-2/process/
- Putnam, R. (2001). Social capital: mesurement and consequences. *Canadian Journal of Policy Research*, 70(2), 41–51.
- Rental Listings in Palo Alto CA 82 Rentals. (2015, November 28). Retrieved November 29, 2015, from http://www.zillow.com/homes/for_rent/Palo-Alto-CA/house,condo,apartment_duplex,mobile,townhouse_type/26374_rid/2-beds/37.546754,-121.83117,37.216659,-122.439538_rect/10_zm/

- Ryan, M. (2014, December 12). Using accessory dwelling units to bolster affordable housing | Smart Growth America. Retrieved from http://www.smartgrowthamerica.org/2014/12/12/using-accessory-dwelling-units-to-bolster-affordable-housing/
- Schleicher, D. (2013, May). City unplanning. Yale Law Journal, 122(7), 1670+.
- Sheyner, G. (2014, December 12). Changing the conversation: Who, or what, is Palo Alto Forward? Retrieved July 13, 2015, from http://www.paloaltoonline.com/news/2014/12/12/changing-the-conversation-who-or-what-is-palo-alto-forward
- Sheyner, G. (2015, October 17). Palo Alto to consider encouraging more granny units.

 Retrieved November 29, 2015, from

 http://www.paloaltoonline.com/news/2015/10/17/palo-alto-to-consider-encouraging-more-granny-units
- Sheyner, Gennedy. (2014, May 16). Palo Alto joins effort to reform Prop. 13. Retrieved November 4, 2015, from http://paloaltoonline.com/news/2014/05/14/palo-alto-joins-effort-to-reform-prop-13
- Sheyner, Gennedy. (2015, October 6). Residents call for more housing in Palo Alto.

 Retrieved November 12, 2015, from

 http://www.paloaltoonline.com/news/2015/10/06/residents-call-for-more-housing-in-palo-alto
- Simonson, K. (n.d.). New Avenue tackles housing affordability crisis with software.

 Retrieved November 23, 2015, from

 http://www.bizjournals.com/sanfrancisco/blog/real-estate/2014/09/new-avenue-

- tackles-housing-affordability-crisis.html
- Standard Enabling Acts. (n.d.). Retrieved November 18, 2015, from https://www.planning.org/growingsmart/enablingacts.htm
- Sussman, D. (1994, June 13). The 1950s: So Long, Sleepy Town. Retrieved November 29, 2015, from
 - http://www.paloaltoonline.com/news_features/centennial/1950SA.php
- Thorp, V. (n.d.). Palo Alto 101: What is ABAG and why does it matter for Palo Alto?

 Retrieved from http://www.paloaltopulse.com/2014/09/23/what-is-abag-and-why-does-it-matter-for-palo-alto/
- Types of Zoning Codes and Formats: Discussion Paper City of Palo Alto. (2001, July).

 Retrieved November 21, 2015, from

 http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=787&TargetID=23
- Village of Euclid v. Ambler Realty Co. | US Law | LII / Legal Information Institute.

 (n.d.). Retrieved November 3, 2015, from

 https://www.law.cornell.edu/supremecourt/text/272/365
- Vision and Mission. (2015). Retrieved November 23, 2015, from http://lilypadhomes.org/vision-and-mission/
- Ward, W. (1993). *Palo Alto: A Centennial History*. Palo Alto, CA: Palo Alto Historical Association.
- Zenbox design. (2014). Retrieved November 26, 2015, from http://www.zenboxdesign.com/