PLANNING FOR AFFORDABLE HOUSING

A Suitability Analysis for Affordable Multifamily Housing in Hayward, CA

Senior Project

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INTRODUCTION

PROJECT SUMMARY

The City of Hayward's General Plan indicates that affordable housing for people of all socioeconomic incomes is essential to the health and well-being of the community. The City has continued to assist and make efforts in supporting the building of affordable housing. However, this project seeks to support the City's goal of building affordable housing by recommending the locations for appropriate developments. Therefore, this project intends to provide research and investigate vacants lots that should be prioritized for multifamily affordable housing within the City of Hayward.

Project Question: How can we use ArcGIS to support the selection of suitable sites to prioritize for the development of multifamily affordable housing within the City of Hayward?

This project will determine appropropriate locations by completing a site selection suitability analysis using ArcGIS based on a set of specific criteria. In this investigation, we identified and reviewed factors such as: zoning, cost of land, public amenities, health & educational facilities, environmental concerns, proximity to public transit, employment and walkability index. We used these factors as a rating system to reveal recommendations for vacant lots that are most suitable for prioritizing multifamily affordable housing based on the established criteria.

PROBLEM STATEMENT

The City of Hayward is located the San Francisco-Oakland-Hayward metro area and is one of the most unaffordable regions in the United States. The State of California's housing crisis can be visible throughout the State, however, in the City of Hayward there are many people who can not afford to live there because of the high cost of living. One particular group that faces hardships are low-income families. With high rents, low vacancy rates, and a lack of unaffordable housing options, families in Hayward face incredible challenges when seeking to find a home. For many of these families, buying a home is out of reach or impossible and renting a unit is the only available option.

The median value of an owner-occupied unit in Hayward was $462,000 in 2017.

A combination of factors such as low income earnings, limited supply of rental units, and increasing housing costs, among

other factors, have made renting a unit become infeasible as well. However, low-income families experience unique challenges that can having direct intergenerational outcomes due to the type, size, quality, and location of housing they live in. Low-income families who are priced out of the local housing market go through great lengths to seek safe, affordable, and appropriately-sized homes to raise their family.

According to the U.S. Census Bureau in 2017, Hayward had a median gross rent of $1,562 for an occupied unit which is 15% more than the State of California ($1358) and 59% more than the United States as a whole ($982). Rental vacancy rates in the City were low at 3.2% compared to 3.6% for the State of California and 6.1% for the United States. Low vacancy rates indicate a low supply of rental units within the City which promotes the market to raise rents as a result.

The City of Hayward has seen high rents cause households to be rent-burdened (meaning they spend more than 30% of their income on rent alone) which has lasting impacts on families' ability to save money, gain credit, and achieve long-term housing such as homeownership. More than half (54.4%) of all households renting in the City of Hayward are rent-burdened. When low income families are rent-burdened, they spend more of their income on housing costs and direct less money towards savings and spending on local goods or services.

More than half (54.4%) of all households renting in the City of Hayward are rent-burdened.

The creation of more affordable housing is a way that can affect the supply of rental units to benefit low income families and address the housing crisis. Therefore, affordable housing production is an investment in the community that would relieve low income families of market pressures that prevent them from economic mobility and opportunities to wealth creation. Multifamily affordable housing projects are a suitable, but not universal, path towards addressing the State of California's housing crisis and Hayward's own housing crisis. This project focuses on multifamily affordable housing projects because they are a common and more feasible type when land is constrained and costs are very high. This project aims to address urban planning challenges in locating suitable affordable housing sites for the prioritization of multifamily housing.

PROJECT OBJECTIVE

The primary objective of this project is to identify suitable sites within the City of Hayward to inform land use decision-makers about where to build affordable housing. These sites should be prioritized specifically for the development of multifamily affordable housing. Affordable housing is defined as housing where a household pays no more than 30% of their income towards housing costs such as rent or mortgage payments, utilities, property taxes, and insurance on owner-occupied housing.

The California Department of Housing and Community Development (HCD) indicates that the "affordable housing cost" for lower income households is based on the Area Median Income (AMI). HCD publishes Income Limits each year as a guide for determining applicant eligibility for designated housing assistance programs. These income limits use County AMI information and number of persons per household to determine income limits for applicants seeking affordable housing.

AUDIENCE

The intended audience of this project is to land use decision-makers in Hayward, California and surrounding stakeholders seeking the implementation of multifamily affordable housing. Land use decision-makers include: urban planners, real estate professionals, developers (private and non-profit), educators, public officials, and local community leaders or organizers, and general residents living in and surrounding the community. Our project seeks to address significant concerns in the City of Hayward to support the development of affordable housing for low-income families who need desperately need it.

Chapter Two
BACKGROUND

REGIONAL CONTEXT

The City of Hayward, located in Alameda County, is a chartered city known also known as the "Heart of the Bay." The City of Hayward is also within the Oakland-Hayward-Berkeley Housing Market Area, in which, the U.S. Department of Housing and Urban Development's Office of Policy Development and Research (HUD PD&R) created a comprehensive housing market analysis that included the City of Hayward. In this factual report by HUD PD&R published on January 1, 2017, it detailed the tight housing conditions in both the sales market and rental market of housing units within the three cities of Oakland, Hayward, and Berkeley. It cited that the Oakland-Hayward-Berkeley Housing Market Area (also referred to as Oakland HMA) had a housing sales vacancy of 0.6% and a housing rental vacancy rate of 2.7%, by the end of 2016.

After the end of the recession, the local economy began to shift away from manufacturing, agriculture, and mining, logging, and construction sectors towards other economic sectors such as technology. The influence of these new jobs, that were originally created in neighboring technology-based economies such as San Francisco and San Jose, have significantly increased the job growth rate of Oakland HMA. Within the five-year period of 2012-2016, nonfarm payrolls increase 2.8% per year, while the national average increase was 1.8%, respectively. With an increasing payroll, the desire to live in cities such as the City of Hayward increases the difficulty of low-income families to compete with higher-income individuals or families.

Housing Market

The City of Hayward in 2017 had a homeowner vacancy rate of 0.6% and a rental vacancy rate of 3.2%, respectively (U.S. Census Bureau, 2013-2017 ACS 5-Year Estimates). These local vacancy rates are similar to the Oakland HMA vacancy rates, which suggests that the City of Hayward's vacancy rate (both homeownership and rental) are on average similar to the rest of the neighboring housing market region. The majority of housing units in the City of Hayward are single family homes (1-unit detached) which comprises 51.9% (25,332) of all housing units, whereas 17.2% (8,397) of the City's housing units are 20 or more unit structures, in 2017 respectively.

The median value of owner-occupied units in 2017 was $462,000 while Alameda County's median value of $649,100, an increase 24.7%. The state of California's median sales price of owner-occupied units in 2017 was $443,400, which was 4.1% less than the City's median sales price of owner-occupied units within the same year. An owner-occupied unit includes data on single-family homes, duplexes, condominiums, or any other type of housing available for sale. While the cost of buying a home within the City of Hayward is similar to the state of California, it is drastically higher in the neighboring cities located in Alameda County. Table 1 demonstrates that the values of owner-occupied units are significantly higher in most of the neighboring cities. This is an indication of the how much homes are valued relative to other nearby housing markets;

Hayward has one of the lowest median home values, but still faces incredible challenges that are not unfamiliar in other nearby housing markets.

Table 1. Median Values in Alameda County (2017)

Alameda County Jurisdictions	2017 Median Values
Berkeley, CA	$861,800
Hayward, CA	**$462,000**
Oakland, CA	$564,500
San Leandro, CA	$474,500
Union City, CA	$620,200
Fremont, CA	$785,700
Milpitas, CA	$704,300
Alameda, CA	$729,100
Pleasanton, CA	$879,800

**Median values refer to median value of owner-occupied units in each city within Alameda County.*
**Only nine of the fourteen incorporated cities in Alameda County are listed.*
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Development Trends

One consistent development trend in the City of Hayward and the general Oakland HMA is the rising price of land. According to the City's Planning Division, the City of Hayward is almost entirely "built-out" which makes available land for development restricted. A lack of land supplied coupled with high demands for housing has significantly increased the price of land, which has drastically provided challenges to investments in affordable housing for low income and special needs groups.

In 2012, the asking price for multifamily residential development generally was about $15 to $40 per square foot. This cost would drastically jump to $86.57 per square foot for a multifamily residential development property that was entitled mixed-use and high density. Whereas the cost for development of single-family projects in Hayward costs between $15 and $33 per square foot in 2012.

Another important development trend for building multifamily developments, especially affordable housing projects, is construction costs. Constructions costs take into account the type of housing being built, the type of construction (and appropriate materials required), and the type of parking being provided. In the case of rental apartment projects, construction costs were $237 per square foot in 2012. Since then construction costs for projects that are mixed use and mixed income have increased.

An example in 2018, is a recently approved project by the City's Planning Division called Maple & Main. This project which would provide 240 apartment rental units (20% of which are rent-restricted units at 50% AMI). The construction costs for this project would be about $291 per square foot, which is $54 more than in 2012 (which is a 22.8% increase in the last seven years).

While there are other factors that play significant roles in determining construction costs such as cost of labor, materials, and interest rates, increasing construction costs are an important development trend to consider when building multifamily affordable housing.

Figure 1. Maple & Main Project Rendering

STUDY AREA

Project Location

The City of Hayward is located in Alameda County, California in the East Bay region of the San Francisco Bay Area. The City of Hayward is the sixth largest city in the Bay Area and the third largest in Alameda County.

In 2017, the City had a population of 156,917 residents. It is located primarily between Castro Valley and Union City, and lies at the eastern side of the San Mateo–Hayward Bridge.

Demographics

According to the United States Census Bureau, the city has a total area of 63.7 square miles (165 km2). 45.3 square miles (117 km2) of it is land and 18.4 square miles (48 km2) of it (28.90%) is water.

The Hayward Fault Zone runs through much of Hayward, including the downtown area. The United States Geological Survey has stated that there is an "increasing likelihood" of a major earthquake on this fault zone, with

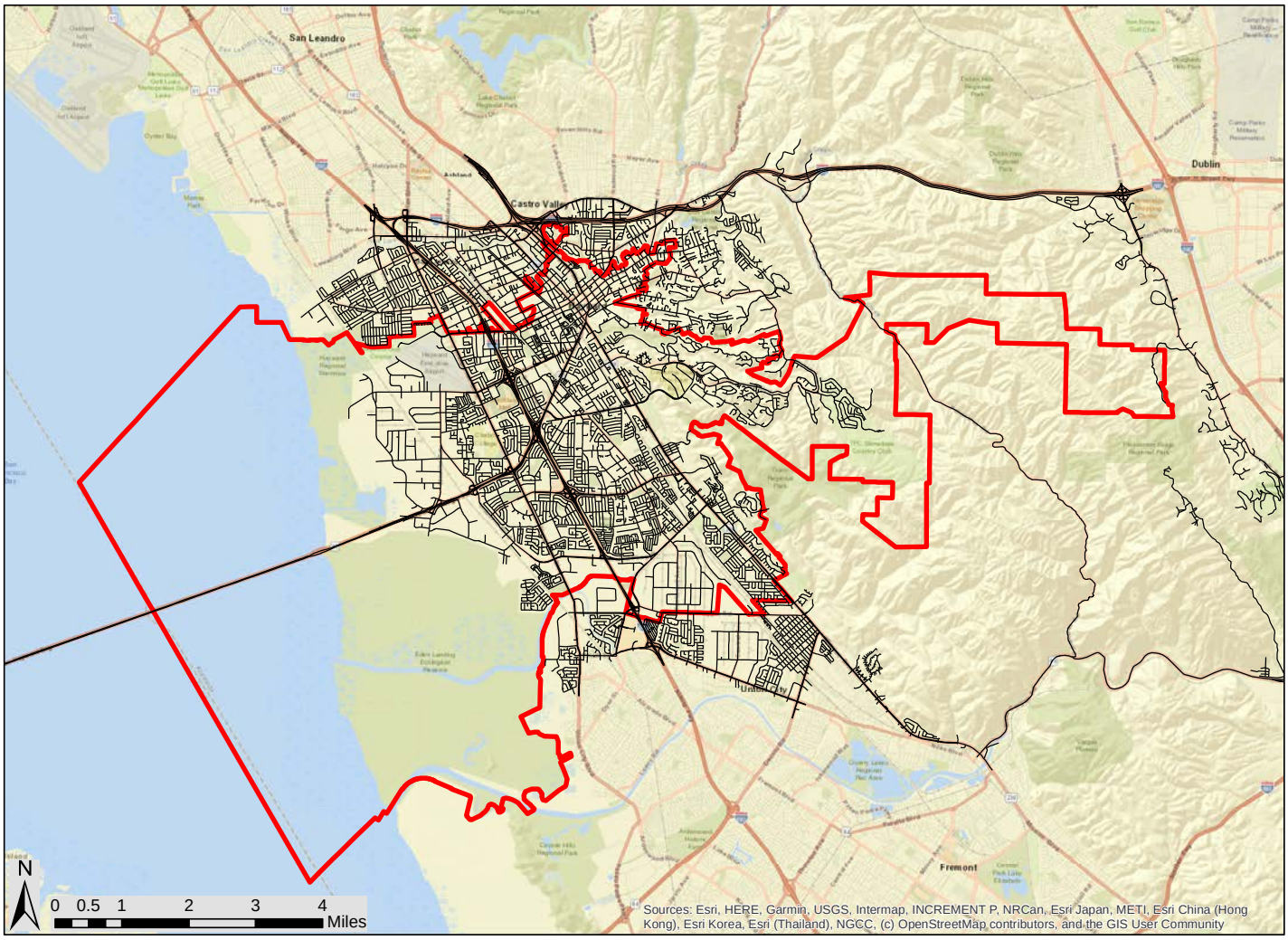

Figure 2. Project Location Map: City of Hayward

potentially serious resulting damage. San Lorenzo Creek runs through the city.

The city was devastated early in its history by the 1868 Hayward earthquake. From the early 20th century until the beginning of the 1980s, Hayward's economy was dominated by its now defunct food canning and salt production industries.

Hayward borders on a large number of municipalities and communities. The cities bordering on Hayward are San Leandro, Union City, Fremont, and Pleasanton. The census-designated places bordering on Hayward are Castro Valley, San Lorenzo, Cherryland, Sunol, and Fairview.

Race & Ethnicity

In 2016, there were 1.59 times more Hispanic residents (62,287 people) in Hayward, CA than any other race or ethnicity. There were 39,187 Asian and 26,470 White residents, the second and third most common racial or ethnic groups.

About 82,144 of Hayward, CA residents are speakers of a non-English language, which is higher than the national average of 21.1%. In 2015, the most common non-English language spoken in Hayward, CA was Spanish. 29.6% of the overall population of Hayward, CA are native Spanish speakers. 7.31% speak Tagalog and 3.9% speak Chinese, the next two most common languages.

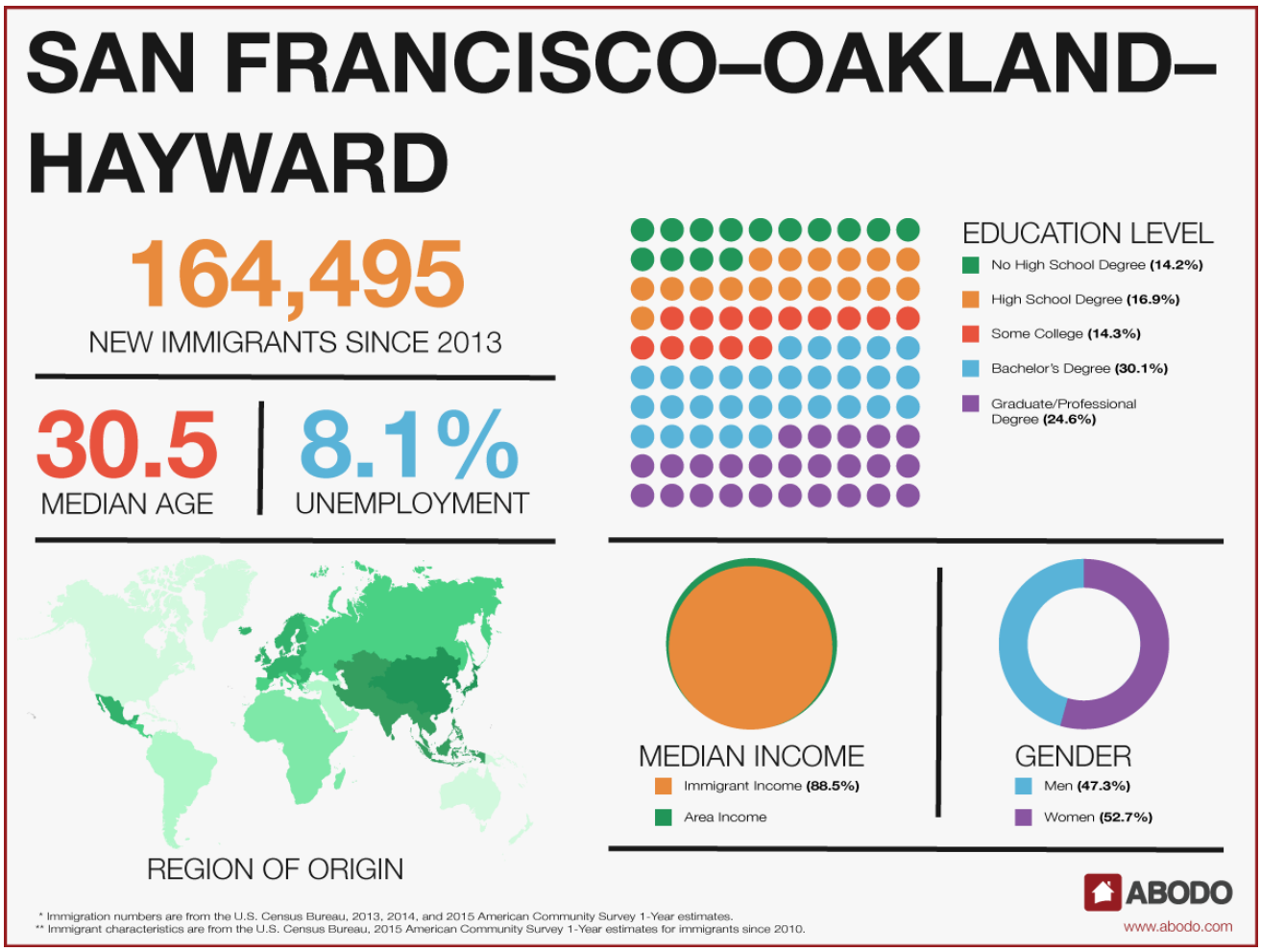

Figure 3. San Francisco-Oakland-Hayward Region Demographics

When compared to other census places, Hayward, CA has a relatively high number of residents that are native Tagalog speakers. In 2015, there were 11,288 native Tagalog speakers living in Hayward, CA, approximately 11.54 times more than would be expected based on the language's frequency in the US more broadly

Education

In 2015 universities in Hayward, CA awarded 5,493 degrees. The student population of Hayward, CA is skewed towards females, with 2,075 male students and 3,418 female students. Most students in Hayward, CA are Asian (1,412 and 25.7%), followed by White (1,267 and 23.1%), Hispanic or Latino (1,187 and 21.6%), and Black or African American (481 and 8.76%).

The largest universities in Hayward, CA by number of graduates are California State University-East Bay (4,174 and 76%), Chabot College (1,103 and 20.1%), and NCP College of Nursing-Hayward (126 and 2.29%). The most popular majors in Hayward, CA are General Business Administration & Management (641 and 11.7%), General Health Services (280 and 5.1%), and Registered Nursing (245 and 4.46%).

The median tuition costs in Hayward, CA are N/A for private four year colleges, and $5,472 and $16,632 respectively, for public four year colleges for in-state students and out-of-state students.

Transportation

Hayward is served by Interstate 880, Interstate 580 with a major intersection near downtown connecting State Route 238 and Interstate 238, State Route 92 (Jackson Street) and State Route 238 (Mission Boulevard/ Foothill Boulevard). Mission Boulevard has been long known for chronic traffic congestion. Past proposals to convert Mission Boulevard to a freeway or build a 238 bypass have been controversial. One proposal, to build a freeway parallel to Mission Boulevard, extending a freeway south from 580 where it turns east towards Castro Valley, and connecting to Industrial Boulevard, had land purchased, but was cancelled in 2004 after years of debate. The land is now scheduled for sale and zoning. Mission, Jackson, and Foothill all converge at one congested intersection south of downtown, known historically as "Five Flags" for a line of flagpoles located there. To alleviate congestion in the downtown area, the city has converted the A Street, Mission and Foothill triangle to one-way thoroughfares (counterclockwise), and is adding road improvements, landscaping, and telephone/cable undergrounding to Mission Boulevard south to Industrial Boulevard, and to Foothill Boulevard north to 580.

Bay Area Rapid Transit (BART), the regional rapid transit system, has two stations in Hayward: the Hayward station, in downtown; and the South Hayward station, near the Hayward–Union City border. BART operates a repair yard in Hayward. The AC Transit bus system, which provides bus service for Alameda County and Contra Costa County, operates in Hayward, and has a repair/training center located there. Amtrak, the national rail passenger system, provides daily service at its Hayward station for the Capitol Corridor train, which runs between San Jose in the South Bay, and Auburn in the Greater Sacramento area.

Aviation

Hayward has a general aviation airport, the Hayward Executive Airport. The Hayward Air National Guard station was located at the airport in 1942, until being reassigned to Moffett Field in 1980.

Income

Median household income in Hayward, CA is $68,138. Males in Hayward, CA have an

average income that is 1.28 times higher than the average income of females, which is $56,697. The income inequality of Hayward, CA (measured using the Gini index) is 0.507 which is higher than the national average. In 2017, full-time male employees in Hayward, CA made 1.26 times more than female employees.

About 10.5% of the population for whom poverty status is determined in Hayward, CA (16.3k out of 154k people) live below the poverty line, a number that is lower than the national average of 13.4%. The largest demographic living in poverty are Females 25 - 34, followed by Females 35 - 44 and then Males 18 - 24. The most common racial or ethnic group living below the poverty line in Hayward, CA is Hispanic, followed by White.

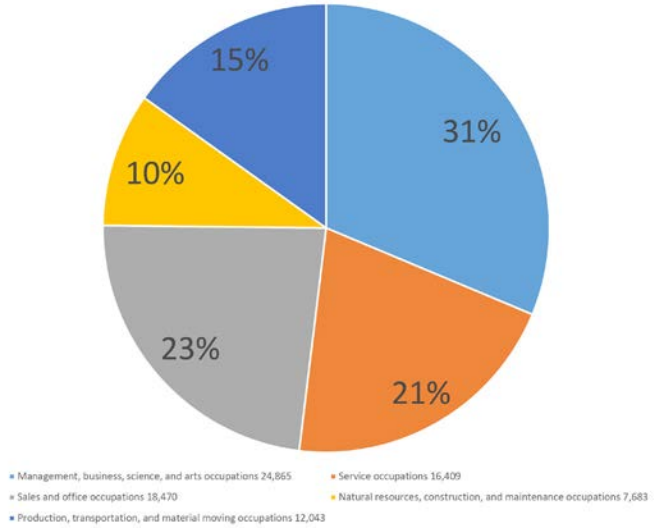

Figure 4. Pie Chart of Occupations in Hayward, California (U.S. Census, 2013-2017)

The median household income in the City of Hayward in 2017 was approximately $74,927.

Economy

The largest industries in Hayward, CA are Healthcare & Social Assistance (10,223), Manufacturing (8,451), and Retail trade (8,099). The most common jobs held by residents of Hayward, CA, by number of employees, are Office & Administrative Support Occupations (11,464 people), Sales & Related Occupations (7,006 people), and Management Occupations (6,151 people).

The highest paid jobs held by residents of Hayward, CA, by median earnings, are Law Enforcement Workers Including Supervisors ($90,833), Life, Physical, & Social Science Occupations ($82,639), and Health Diagnosing & Treating Practitioners & Other Technical Occupations ($82,368).

Crime Rates

Hayward crime statistics report an overall downward trend in crime based on data from 18 years with violent crime decreasing and property crime decreasing. Based on this trend, the crime rate in Hayward for 2019 is expected to be lower than in 2016.

The city violent crime rate for Hayward in 2016 was lower than the national violent crime rate average by 1.37% and the city property crime rate in Hayward was higher than the national property crime rate average by 17.53%. In 2016 the city violent crime rate in Hayward was lower than the violent crime rate in California by 12.06% and the city property crime rate in Hayward was higher than the property crime rate in California by 12.82%.

Hayward crime statistics report an overall downward trend in violent and property crime.

NEEDS ASSESSMENT

In this needs assessment, we review an established "need" or gap in affordable housing for families in the City of Hayward. Thus, the target group for this project is lower-income families or households who live in the City of Hayward with less than 80% AMI. Our project includes a needs assessment because we want to quantify the need and present potential solutions in Chapter 6 through suitable vacant lots for potential multifamily affordable housing developments. To conduct this needs analysis, we primarily researched legal documents pertaining to affordable housing such as the City's Housing Element and RHNA Allocation.

Housing Element

The City of Hayward's Housing Element is one of their required elements under the General Plan. The Housing Element is a requirement by State law for jurisdictions to detail and analyze the housing needs of the community, the barriers or constraints to building housing, and actions or steps towards addressing the concerns outlined.

"The purpose of the Housing Element is to achieve an adequate supply of decent, safe, and affordable housing for Hayward's existing and future workforce, residents, and special needs groups." - City of Hayward Housing Element

According to the City's Housing Element (2014), the optimum level of supply and demand for housing is represented by a vacancy rate between six and seven percent for rental housing and between one and two percent for ownership housing. In 2010, the City had a rental vacancy rate of 6.6 percent and a homeowner vacancy rate of 2.3 percent. These levels are considered optimum because they represent the equilibrium between an adequate supply of units and fair price for units. When vacancy rates are within the optimal level range, low income families and households have less constraints on their housing options if they can obtain an appropriately sized unit at a fair price.

However, significant changes in the housing market has drastically affected the more recent rates since 2010. According to the U.S. Census Bureau in 2017, the City of Hayward had a rental vacancy rate of 3.2 percent and a homeowner vacancy rate of 0.6 percent, respectively.

These changes in vacancy rates indicate a shortage in supply of housing units which has the effect of increasing housing prices throughout neighborhoods in the City of Hayward. With lower vacancy rates, the local housing market begins to place barriers for lower income families and households to find a home without paying for a smaller or more expensive unit.

Growth of jobs is also another factor that contributes to the attraction of more renters in the housing market which increases competition. In 2010, the City of Hayward had 69,100 jobs according to the Bay Area Association of Governments (ABAG). The ABAG also projects that between 2010 and 2040, there will 20,800 new jobs added in the City of Hayward (a 30% increase from 2010 estimates). Although, an increase of jobs in the area increases demand, it also has the effect of pushing housing developers to meet some of that demand.

The Sustainable Community Strategy for the San Francisco Bay Area specifically indicates that population growth would contribute to an increase of 12,288 new housing units between 2010 and 2040 (a 25% increase from 2010 estimates). While it is unclear whether this increase in housing units will create an optimal level of supply and demand for housing units, it is to emphasize that future vacancy rates will provide a glance at future housing costs and conditions.

Regional Housing Needs Allocation (RHNA)

The Regional Housing Needs Assessment, created in 1969, is another State law that mandates responsibility for local jurisdictions to develop affordable housing. Regardless of income, each jurisdiction must incorporate policies that promote new housing based on the requirements sent out by the California Department of Housing and Community Development (HCD).

Every eight years, HCD sends out a "fair share" of housing to be built in California to a Council of Government (COG) agency, such as ABAG, to accommodate for growth and demand. Once HCD has consulted and completed the RHNA process, ABAG divides the "fair share" of housing to its individual counties and cities in a RHNA Plan.

Each local jurisdiction outlined in the RHNA Plan must provide an annual report to HCD to comply with State law and demonstrate progress on working towards completing their assigned affordable housing units. Appropriate additions are then made to each local jurisdiction's Housing Element to abide by State law.

The most recent RHNA eight-year period for ABAG was the 5th cycle Housing Element 2015-2023. The total regional housing need for ABAG was 187,990 affordable housing units over the eight-year period. The City of Hayward specifically had a designated total of 3,920 affordable housing units. The breakdown of income groups for the total designated number of affordable housing units assigned to the City is displayed in Table 2.

As demonstrated in Table 2 there is a great need and pressure to provide affordable housing

Land Use Policies Related to the Housing Element

LU 1.3: Growth and Infill Development The City shall direct local population and employment growth toward infill development sites within the city, especially the catalyst and opportunity sites identified in the Economic Development Strategic Plan. [Source: New Policy; GPUTF, Public] (MPSP)

LU 1.6: Mixed-Use Neighborhoods The City shall encourage the integration of a variety of compatible land uses into new and established neighborhoods to provide residents with convenient access to goods, services, parks and recreation, and other community amenities.

LU 3.5: Mixed-Density Development Projects The City shall encourage infill residential developments that provide a mix of housing types and densities within a single development on multiple parcels. Individual parcels within the development may be developed at higher or lower densities than allowed by the General Plan, provided that the net density of the entire development is within the allowed density range.

Table 2. Final Regional Housing Needs Allocation, 2015-2023

City of Hayward		
Income Categories	AMI	Number of Units Assigned
Very-Low	<50%	851
Low	51-80%	480
Moderate	81-120%	608
Above Moderate	>120%	1981
Total		3920

**RHNA units assigned for the Very-Low Income Category includes allocations for both the Very-Low Income (31-50% AMI) and Extremely-Low Income (<30% AMI) groups.*
Source: Regional Housing Needs Plan, San Francisco Bay Area: 2015-2023

within the City of Hayward. In 2017 the City's Housing Manager, Christina Morales, stated that an affordable rent for one-bedroom would require at least an annual income of $72,000 to be considered affordable. HCD is also in charge of determining income limits per income groups based on AMI. Table 3 shows the income limits for each income category and household size for Alameda County.

"In 2017, the average monthly rent for one bedroom apartments in the City of Hayward required an annual income of $72,000 per year to be considered affordable."

- Christina Morales, Housing Manager for the City of Hayward

Table 3. Alameda County 2019 Income Limits

County	Income Category	Number of Persons in Household							
		1	2	3	4	5	6	7	8
Last page instructs how to use income limits to determine applicant eligibility and calculate affordable housing cost and rent									
Alameda County 4-Person Area Median Income: **$104,400**	Extremely Low	24400	27900	31400	34850	37650	40450	43250	46050
	Very Low Income	40700	46500	52300	58100	62750	67400	72050	76700
	Low Income	62750	71700	80650	89600	96800	103950	111150	118300
	Median Income	73100	83500	93950	**104400**	112750	121100	129450	137800
	Moderate Income	87700	100250	112750	125300	135300	145350	155350	165400

Source: California Department of Housing and Community Development, State Income Limits for 2018

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Low Income Housing Tax Credits (LIHTC)

The Low-Income Housing Tax Credit (LIHTC) is the most important resource for creating affordable housing in the United States today. The Low-Income Housing Tax Credit (LIHTC) subsidizes the acquisition, construction, and rehabilitation of affordable rental housing for low- and moderate-income tenants. The LIHTC was enacted as part of the 1986 Tax Reform Act. Since the mid-1990s, the LIHTC program has supported the construction or rehabilitation of about 110,000 affordable rental units each year about 2 million units in all since its start.

Two types of LIHTCs are available depending on the nature of the construction project. The 9% credit is generally reserved for new construction, while the 4% credit is typically used for rehabilitation projects and new construction that is financed with tax-exempt bonds.

The federal government issues tax credits to state and territorial governments. State housing agencies then award the credits to private developers of affordable rental housing projects through a competitive process. Developers generally sell the credits to private investors to obtain funding. Once the housing project is made available to tenants, investors can claim the LIHTC over a 10-year period.

Many types of rental properties are LIHTC eligible, including apartment buildings, single-family dwellings, townhouses, and duplexes.

Owners or developers of projects receiving the LIHTC agree to meet an income test for tenants and a gross rent test. There are three ways to meet the income test:

1. At least 20 percent of the project's units are occupied by tenants with an income of 50 percent or less of area median income adjusted for family size (AMI).

2. At least 40 percent of the units are occupied by tenants with an income of 60 percent or less of AMI.

3. At least 40 percent of the units are occupied by tenants with income averaging no more than 60 percent of AMI, and no units are occupied by tenants with income greater than 80 percent of AMI.

The gross rent test requires that rents do not exceed 30 percent of either 50 or 60 percent of AMI, depending upon the share of tax credit rental units in the project. All LIHTC projects must comply with the income and rent tests for 15 years or credits are recaptured. In addition, an extended compliance period (30 years in total) is generally imposed.

Congress sets a limit on the amount of LIHTC that can be allocated in any year. For 2018, each state was originally allocated $2.765 million or $2.40 per capita, whichever was larger. But Congress provided a 12.5 percent boost through 2021, so these figures were increased to $3.1 million and $2.70.

This structure guarantees that states with low populations get a somewhat larger award when calculated on a per capita basis. States then allocate these credits (generally through state housing finance agencies) to developers, based on state-created qualified allocation plans. These plans are required to give priority to projects that serve very low income households and that provide affordable housing for longer time periods.

HOME Investment Partnerships Program

The HOME Investment Partnerships Program (HOME) provides formula grants to states and localities that communities use, often in partnership with local nonprofit groups, to fund a wide range of activities includingbuilding, buying, and/or rehabilitating affordable housing for rent or homeownership or providing direct rental assistance to low-income people. It is the largest Federal block grant to state and local governments designed exclusively to create affordable housing for low-income households.

HOME Eligible Grantees

States are automatically eligible for HOME funds and receive either their formula allocation or $3 million, whichever is greater. Local jurisdictions eligible for at least $500,000 under the formula ($335,000 in years when Congress appropriates less than $1.5 billion for HOME) also can receive an allocation. The formula allocation considers the relative inadequacy of each jurisdiction's housing supply, its incidence of poverty, its fiscal distress, and other factors.

Communities that do not qualify for an individual allocation under the formula can join with one or more neighboring localities in a legally binding consortium whose members' combined allocation would meet the threshold for direct funding. Other localities may participate in HOME by applying for program funds made available by their State. Congress sets aside a pool of funding for distribution to insular areas, equivalent to the greater of $750,000 or 0.2 percent of appropriated funds.

Shortly after HOME funds become available each year, HUD informs eligible jurisdictions of the amounts earmarked for them. Participating jurisdictions (PJs) must have a current and approved Consolidated Plan, which will include an action plan that describes how the jurisdiction will use its HOME funds. A newly eligible jurisdiction also must formally notify HUD of its intent to participate in the program.

HOME Eligible Activities

Participating jurisdictions may choose among a broad range of eligible activities, using HOME funds to provide home purchase or rehabilitation financing assistance to eligible homeowners and new homebuyers; build or rehabilitate housing for rent or ownership; or for "other reasonable and necessary expenses related to the development of non-luxury housing," including site acquisition or improvement, demolition of dilapidated housing to make way for HOME-assisted development, and payment of relocation expenses. PJs may use HOME funds to provide tenant-based rental assistance contracts of up to 2 years if such activity is consistent with their Consolidated Plan and justified under local market conditions. This assistance may be renewed. Up to 10 percent of the PJ's annual allocation may be used for program planning and administration.

HOME-assisted rental housing must comply with certain rent limitations. HOME rent limits are published each year by HUD. The program also establishes maximum per unit subsidy limits and homeownership value limits.

Some special conditions apply to the use of HOME funds. PJs must match every dollar of HOME funds used (except for administrative costs and CHDO predevelopment loans for projects that do not move forward) with 25 cents from nonfederal sources, which may include donated materials or labor, the value of donated property, proceeds from bond financing, and other resources. The match requirement may be reduced if the PJ is distressed or has suffered a Presidentially declared disaster. In addition, PJs must reserve at least 15 percent of

their allocations to fund housing to be owned, developed, or sponsored by experienced, community-driven nonprofit groups designated as Community Housing Development Organizations (CHDOs). PJs must ensure that HOME-funded housing units remain affordable in the long term (20 years for new construction of rental housing; 5-15 years for construction of homeownership housing and housing rehabilitation, depending on the amount of HOME subsidy). PJs have two years to commit funds (including reserving funds for CHDOs) and five years to spend funds.

HOME Eligible Beneficiaries

The eligibility of households for HOME assistance varies with the nature of the funded activity. For rental housing and rental assistance, at least 90 percent of benefiting families must have incomes that are no more than 60 percent of the HUD-adjusted median family income for the area. In rental projects with five or more assisted units, at least 20% of the units must be occupied by families with incomes that do not exceed 50% of the HUD-adjusted median. The incomes of households receiving HUD assistance must not exceed 80 percent of the area median. HOME income limits are published each year by HUD.

HUD does not provide HOME assistance directly to individuals or organizations. If you are interested in participating in this program, you need to contact your local or state government to find out how the program operates in your area. Participation requirements may differ from one grantee to another.

Implications with Prop 13

Prop 13 amended California's constitution to assess property taxes at 1% of a property's purchase price with increases limited to less than a 2% annually in assessed value. If the property is sold, its value is assessed at sale price. The rule's reach was later expanded by Propositions 58 and 193 to exclude heirs from reassessment as well. Critically, Prop 13 treats individuals and commercial entities identically.

Proposition 13, one important aspect appears to have been largely overlooked. That is the effect this law has had on property values, especially single-family homes in California.

Prior to the passage of Proposition 13, county assessors were required to assess all property, including homes, at 25 percent of market value. Most urban tax code areas had a tax rate of about $12 per $100 of assessed value. Thus, the effective tax rate was about 3 percent of market value. Most California homeowners were paying less because assessors were not keeping up with moderately increasing values.

With the passage of Proposition 13, the property tax burden on all property owners was substantially reduced. Older people, who, prior to Proposition 13, would feel economic pressure to sell their home and find other living arrangements, could now remain in their affordable home and not have to move. The result is that millions of elderly people (couples, widows and widowers) are now living in homes that in prior years would have been sold.

Thus, millions of homes have not been, and are not, on the market. As the supply of homes is stabilized or reduced and demand remains strong, prices are profoundly affected. The economy felt the result of this demand-driven price increase in the years following the passage of Proposition 13 in 1978.

In the 30-year period from 1978 to 2008, the price of homes in California far outpaced the Consumer Price Index for other commodities, due in large part to the reduced supply of homes resulting from the passage of Proposition 13.

Chapter Three
Case Studies

This chapter features two case studies of multifamily affordable housing developments where we introduced the characteristics and processes that made them successful. Both projects are rental multifamily affordable housing developments located in the East Bay area to provide local models for our project. Our project also uses case studies to review the outcomes and lessons learned of investing in affordable housing. The insight gained from these two projects' qualities and locations influenced our criteria for conducting the suitability analysis.

Case Study #1

Project Name: Hismen Hin-Nu Terrace
Developers: East Bay Asian Local Redevelopment Corporation & San Antonio Community Development Corporation
Location: Oakland, California

Project Open: 1995
Site: 1.60 acres
Density: 61 du/acre
Number of Units: 92
Unit Plans: 585-1,200 sq. ft.

Figure 5. Front Street View of Hismen Hin-Nu Terrace (2017)

Hismen Hin-Nu Terrace is a multifamily rental housing complex that resides in Oakland's Lower Fruitvale/San Antonio district. It is located at 2555 International Boulevard, Oakland, CA 94601. The project was initially started by the East Bay Asian Local Redevelopment Corporation, but later did a joint-venture with the San Antonio Community Development Corporation because they had stronger ties to the local community for outreach. These two groups also coordinated with the Oakland Redevelopment Agency in the early 1990's to complete the project by 1995.

The addition of Hismen Hin-Nu Terrace into the neighborhood added 92 affordable housing units, a community center, courtyards, social services, and commercial space. The successful opening of Hismen Hin-Nu Terrace helped revitalize the neighborhood with its close connections to public outreach and engagement in the design process. This type of engagement in the neighborhood also spurred the development of more homes in the area, the renovation of two local restaurants, and some street vending.

Figure 6. Street Vending Outside Project

This project was designed to have an attractive mixed used development with quality housing over commercial space. The project name, Hismen Hin-Nu, which means "sun gate" was named by the indigenous elders of the local Muhwekma Ohlone tribe. The name was also influenced by the gate which was created by a local artist whose work presented itself as an art and a form of protection.

Figure 7. Front Entrance Sun Gate

The project's design was influenced by public engagement via workshops to have the building heights be four-stories at the front and three-stories at the back. This would provide enough area in the middle of the project to create courtyard space for residents to enjoy.

Figure 8. Front Entrance View of Courtyard

Figure 9. Overview of Center Courtyard

Table 4. Hismen Hin-Nu Terrace Program

Hismen Hin-Nu Terrace, Oakland, CA			
Unit Type	Number of Units	Unit Size	Max. Unit Price (2019)
One-bedroom	16	585 sq. ft.	$684-$1,173
Two-bedroom	37	800 sq. ft.	$782-$1,340
Three-bedroom	29	1,050 sq. ft.	$880-$1508
Four-bedroom	10	1,200 sq. ft.	$977-$1676
Total Units	92		

**Prices estimated using HCD Income Limit Guidelines and Income Qualifications for Oakland HUD Rental Assistance.*
Source: California Department of Housing and Community Development & Affordablehousingonline.com

The project's range of housing choices was also another key component that addresses the community's needs, especially for larger families. Hismen Hin-Nu Terrace is composed of one-bedroom and two-bedroom apartments and three-story and four-story townhouses. About 40% of the units are available households at 35% AMI and 60% of the units are available to households between 50-60% AMI. Table 4 shows the project's program, specifying unit type, number of units, size, and pricing.

Financing

The project's total development cost was just under $19 million, specifically at approximately $18,911,648. The breakdown of project development costs can be seen in Table 5.

The project used a combination of funding sources to finance this project such as tax credits, grants, and loans (both construction and permanent loans). Table 6 also demonstrates the residential sources of where the funding came from and those who invested in the project.

Table 5. Total Development Costs

Item	Cost
Site Acquisition (with off-site improvements)	$854,829
Construction	$9,994,693
Fees (permits, A/E, inspection)	$1,284,575
General Development Costs (incl. interest, loan fees, insurance)	$1,764,543
Total Development Costs (before syndication costs and dev. fee)	**$13,898,640**
Interest on Tax Credit Bridge Loan	$2,023,481
Syndication Costs	$904,978
Development and Operating Fees	$2,084,550
Total	**$18,911,648**

Source: Visions of Urban Excellence: 1997 Rudy Bruner Award for Urban Excellence. Cambridge , MA: Bruner Foundation

The project used a combination of funding sources to finance this project such as tax credits, grants, and loans (both construction and permanent loans). Table 6 also demonstrates the residential sources of where the funding came from and those who invested in the project.

Table 6. Residential Costs

Residential Financing Source	Amount
Calif. Community Reinvestment Corp.	$1,210,000
State Rental Housing Construction Program	$3,720,386
City of Oakland	$1,775,127
Merritt Community Capital (tax credits)	$3,153,487
Fannie Mae (tax credits)	$8,926,124
Total	**$18,785,124**

Source: Visions of Urban Excellence: 1997 Rudy Bruner Award for Urban Excellence. Cambridge , MA: Bruner Foundation

Table 7 displays the list of funding sources for the commercial portion of the project. One key challenge in building this project was that funding for the residential and commercial portions had to be completely separate and could cannot used for other costs unrelated to their use. Being a mixed-use project posed somewhat more complex challenges, but it obtained intercreditor agreements to help remedy the inability to intermingle sources of funding.

Table 7. Commercial Costs

Commercial Financing Source	Amount
City of Oakland (CDBG)	$650,000
Ford Foundation	537,346
Irvine Foundation	500,000
EBALDC Investment (From Tax Credit Development Fee)	107,900
Total	**$1,795,246**

Source: Visions of Urban Excellence: 1997 Rudy Bruner Award for Urban Excellence. Cambridge , MA: Bruner Foundation

The success of Hismen Hin-Nu Terrace relied on concrete sources of funding, strong community outreach and engagement, and excellent planning for multifamily housing that's accessible and affordable. An important note about Hismen Hin-Nu Terrace is that it provided social programs and community services such as HeadStart on-site, Shelter Plus Care (which provides drug and alcohol treatment), and Kid's House which is an after-school program for children ages 6 to 12. It also has a community center space for residents to enjoy and commercial space that included nonprofits, a convenience store, an early childhood education center, and a two-story market hall for local venders and start-up businesses.

It's mixed uses and proximity to public transit and other nearby public amenities has also been highly influential to this project's ability to spur growth in the area. Overall, Hismen Hin-Nu Terrace is an excellent model in which other projects can learn from when it comes to the excellent services, amenities, and public engagement it has offered. Hismen Hin-Nu Terrace will continue to provide tenants great satisfaction because it was built to prioritize them and their community.

Case Study #2

Five88 Apartments, San Francisco CA

Project Name: Five 88 Apartments
Developer(s): Related California & Chinatown Community Development Center
Location: San Francisco, California

Project Open: 2018
Site: 5.15 acres
Number of Units: 200
Unit Plans: 551-914 sq. ft.

Five88 Apartments is notable for design strategies that enhance the life of residents of both Five88 and the surrounding Mission Bay neighborhood. In addition to demonstrating the role of design in the overall success of a project, Five88 has contributed to the transformation of Mission Bay from an underused railyard to vibrant mixed-use, mixed-income neighborhood while advancing city and state policy goals supporting affordable, sustainable, and transit-oriented development.

Developed by Related California and the Chinatown Community Development Center, the project 198 units of affordable housing and 10,000 square feet of ground-floor retail space to Mission Bay.

The 5-story building, organized around a landscaped courtyard, contains 198 affordable units and 2 units that are reserved for building managers. Of the affordable units, 70 are one-bedroom and 128 are two-bedroom apartments; income limits are set at 50 percent of the area median income (AMI) for 40 units and 60 percent of AMI for 158 units.

The Five 88 Apartments has 198 one- and two-bedroom units for very-low income families making no more than $43,050 for a one-person household and up to $79,740 for a family of five.

These units count toward the city's goal of having 1,900 units of affordable housing in Mission Bay, or about a third of the total units planned for the waterfront community. There are about 860 more affordable housing units left to build, said Slutzkin. Approximately 1,000 units are already finished.

Financing

Nearly half of the project financing was generated through the sale of 4 percent low-income housing tax credits to Wells Fargo, and Citi Community Capital extended credit for

the project. Also, a redevelopment loan helped which was from the city of San Francisco also helped the, who also donated the land, valued at $34.5 million, for the project.

The building's 200 units include just three layouts one one-bedroom and two two-bedroom which cut complexity and construction costs. Another economical design move was the use of conventional Type V, wood-frame construction, with the exception of the single-story concrete parking garage that serves as a podium for the western half of the structure. Five88 is the largest affordable housing building built in San Francisco in the last decade. A portion of the apartments are prioritized for local school and healthcare workers.

The building's courtyard plan comprises two C-shaped sections—the western half with four stories of apartments atop 10,000 square feet of retail and parking on the ground level, the eastern half with four stories of apartments sitting on grade. Resident entrances are via outdoor lobbies at either the north or south end of the block, at the seam between the two sections.

Lobbies lead directly to a central landscaped courtyard, which is split between two levels. The lower is landscaped with drought-tolerant plantings; the upper is adjacent to laundry, fitness room, and resident lounge, plus a community pavilion and an outdoor play area paved in bright blue. Building amenities—including a gym, common room, lounge, and laundry room—are located in a two-story pavilion that sits in the semi-private central courtyard.

Form-based code guidelines provided the 224,370-square-foot building with its basic outlines, but the design details employed on the project give it a distinct presence. Keeping the building height below 65 feet allowed the architects to utilize Type V construction, which

Table 8. Financing for Five88 Apartments

Table 1: Financing for Five88 Apartments

Wells Fargo Bank: low-income housing tax credit equity	$35.4 million
Citi Community Capital: tax-exempt bond	27.7 million
City and County of San Francisco Office of Community Investment and Infrastructure: loan	17.0 million
City and County of San Francisco: loan (accrued interest)	1.1 million
Citi Community Capital: subordinate loan	3.0 million
Total	$84.2 million

Source: Housing and Urban Development, Office of Policy Development & Research

Figure 10. Recreational/Open Space

provided economies not available with Type I or III. The western half of the building is a wood frame atop a concrete garage podium, while the eastern half is solely conventional wood framing.

Baker explains that the firm approaches affordable housing with a "material budget" in mind. "Make 20 percent of it really wonderful," he says. Apartment interiors are simple, finished with Shaw Contract carpeting in the bedrooms and Reward Luxury Vinyl Flooring in the living areas. The primary material used on the exterior is cement plaster, which is accented with cedar and concrete at the lower levels.

Figure 11. Landscaped Courtyard

At the northwest corner, a five-story articulated tower is clad in white standing-seam aluminum; the custom steel rainscreen stretches across half its south façade. Varied perforations, some as open as 50 percent, shield fresh air vents and accentuate the mottled texture of the Cor-Ten. Stormwater management is exploited for playful invention, with downspouts composed of open three-sided rectangular pipes that make musical sounds in the rain. Overall, Five88 represents both a significant addition to the supply of affordable housing in the Bay Area and a guidepost for ongoing efforts toward equitable and sustainable development.

Chapter Four
Methodology

The purpose of this project is to investigate vacant lots for the selection of multifamily affordable housing developments. This project uses Geographic Information Systems (GIS) technology to specifically located appropriate vacant lots based on a set of criteria we find most suitable or unsuitable for multifamily affordable housing developments. For our project, we use ArcMap 10.6.1 to conduct a suitability analysis to identify vacant lots in the City of Hayward where multifamily affordable housing developments should be prioritized.

METHOD

The method used in this project is the Weighted Linear Combination method which supports multi-attribute decision making (MADM). MADM is a process that considers multiple factors when making a decision, which is a requirement for the placement of multifamily affordable housing development. Each attribute in MADM is called a criterion and can be assigned a specific weight based on its importance. Once all spatial features and layers are collected into ArcMap, a composite score is calculated based on the weights of each criterion.

DESIGN

Based on our project's question, we used a variety of factors to contribute to the investigation of finding suitable vacant lots for multifamily affordable housing in Hayward, California. Factors that contributed to the feasibility of building affordable housing were a key aspect in our decision-making process.

Another key aspect were the factors we learned from our case studies in Chapter Three, which indicated successes in affordable housing developments from the planning to building process.

In our Suitability Analysis for multifamily affordable housing development, we used six criteria to determine which vacant lots to recommend for prioritization. The following criteria were split into suitability and constraints factors and includes:

1. ***Suitability***
    - ***a. Public Amenities & Facilities***
    - ***b. Transportation***
    - ***c. Walkability***
2. ***Constraints***
    - ***a. Zoning***
    - ***b. Cost of Land***
    - ***c. Environmental Concerns***

DATA COLLECTION

Data for this analysis were collected from ArcGIS Online, City of Hayward Open Data, Alameda County Open Data, US Census Bureau, the United States Environmental Protection Agency (EPA) Smart Location Database, and the Association of Bay Area Governments Resilience Open Data portal. The datasets were analyzed in the ArcMap program from ArcGIS for Server. Demographic and economic data were primarily obtained from the U.S. Census Bureau via American Factfinder. Other data such as shapefiles were obtained from Open Data sources such as U.S. EPA, ABAG, and City/County Open data sources. Other sources used were Metropolitan Transportation Commission (MTC).

Chapter Five
Suitability Analysis

To successfully complete a preliminary suitability analysis, our team used both shapefiles and excel data from the City of Hayward. Shapefiles and parcel datasets of the City of Hayward were obtained from the City of Hayward's Open Data portal. Excel data was taken from the City of Hayward Parcel Explorer app which was used to identify current vacant and underutilized parcels for the construction of higher density affordable rental housing developments. The excel data was joined into shapefile's attribute table and altered further to only include vacant or underutilized parcels.

Our next step was to begin seeking appropriately zoned parcels by using the information our team had gathered. Zoning was a significant portion of determining where multifamily developments could be built. After we had obtained the vacant parcels shapefile which contained excel data from the City's Open Data portal, we used the Select by Attributes feature to distinguish which vacant parcels were zoned for higher apartment or multifamily developments. The zoning criterion in our study is a stand-alone criterion which means that we used all vacant and appropriately zoned parcels as our starting base for completing other criteria in our suitability analysis. Once we had a layer of data that was appropriately zoned, we could begin with other highly important criteria such as cost of land.

The cost of land in Hayward is an important factor to consider when selecting sites for the construction of higher density affordable rental housing in the City. Information pertaining to the cost of land is found in the parcel dataset, which was obtained from the City of Hayward Parcel Explorer app. Attention was given to the "LandValue" field, as it contained information about the price value for each of the parcels. The data found within the "LandValue" field was then classified into 10 classes using the "Natural Breaks" (Jenks) method. These quantitative classifications were then used to score each parcel from 1-10 and the values were added into a new field within the existing attribute table. Values were ranked as 10 being the least expensive and 1 being the most expensive parcel.

Environmental concerns were also reviewed to determine whether certain vacant lots were under specific constraints. Three different datasets in the form of shapefiles were taken from the Association of Bay Area Government's Resilience Open Data portal. ABAG's Resilience Open Data portal featured important spatial information regarding natural hazards that were used in our project's suitability analysis including: liquefaction susceptibility, earthquake fault lines, ground shaking scenarios from earthquakes, and floodplains.

The liquefaction shapefile was used to determine which vacant lots were in areas of "High" and "Very High" liquefaction susceptibility. We used this factor as a categorical variable by adding a new field into our vacant lots attribute table which denoted a score of 0 or 1. A score of 0 indicated "no, it is not in an area susceptible to liquefaction" and 1 indicated "yes, it is in an area susceptible to liquefaction."

The Alquist-Priolo earthquake fault line supported by the groundsaking scenario determined that the majority of the City of Hayward is at significant risk to ground shaking triggered by an earthquake magnitude of 7.0 or greater. The ground shaking scenario shapefile indicated areas of Hayward where a range of 6.8 to 8.6 magnitudes would be experienced. Our team designated the ground shaking scenario as a quantitative variable that was scored on a scale of 1-10 using the equal interval method. A score of 1 is an expected magnitude of 8.6 and a 10 is

an expected magnitude of 6.8, however most of the City had a score of 2 or 3. These results demonstrated that the entire City is at-risk of a potentially serious earthquake striking.

One last aspect of the environmental concerns were floodplains. Once we had obtained the floodplains shapefile from ABAG Resilience Open Data portal, we clipped the shapefile to only include the jurisdictional boundaries of the City. We then removed certain floodplains to have our layer only include more serious and nuisance flooding areas. These flood zones include Zone AE, Zone AH, Zone AO, and Zone VE. Afterward maintaining these specific flood zones, we used the Select By Location feature to select each parcel that intersected with the flood zones and indicated in the Vacant Parcels attribute table which were in an identified flood zone. This was noted as a categorical variable by adding a field called Floodplain and each parcel was assigned either a 0 for "not in a flood zone" or 1 for "yes, it is in a flood zone."

Site amenities are also essential to take into account when identifying sites for the production of higher density affordable rental housing. The following site amenities are analyzed: public transit (bus stops and rail stations); public parks; public schools (elementary schools, middle schools, and high schools); hospitals; police and fire stations. The datasets depicting the different site amenities were obtained from City of Hayward Open Data and Alameda County Open Data. A total of six layers were created in order to analyze the various site amenities, all of which were deemed categorical variables. Each vacant parcel was then scored on a 0 or 1 scale per amenity based on if it was within ½ mile of each corresponding amenity. A parcel obtained a score of 0 when it was not within said amenity and a score of 1 when it was within proximity of the amenity.

Another factor that was analyzed was the walkability of each parcel. This dataset was taken from the United States Environmental Protection Agency Smart Location Database which gives a Walkability Index for all of the United States. This layer was then clipped to only show data for the City of Hayward. This allowed us to indicate it as a quantitative variable and then individually score each vacant or underutilized parcel from a 1-10 based scale from the Walkability Index.

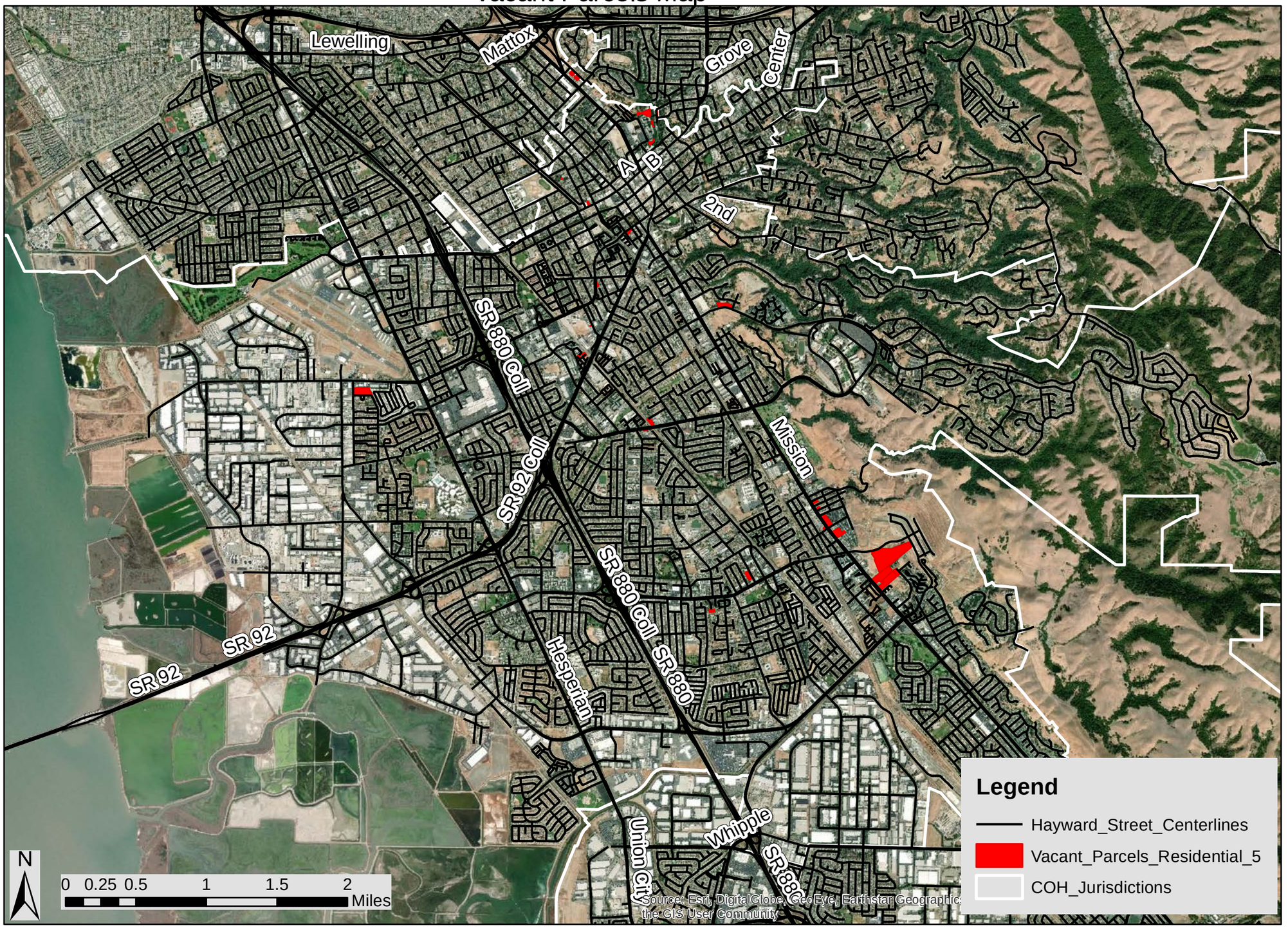
All these factors were taken into consideration and are compiled in Table 9 to display the weighted criteria for our suitability analysis. The highest-scoring three parcels would be the best or most feasible for higher density affordable rental housing. These sites were then investigated further to create individual profiles for each of them in Chapter Six.

Table 9. Suitabiltiy Analysis Values and Weighing

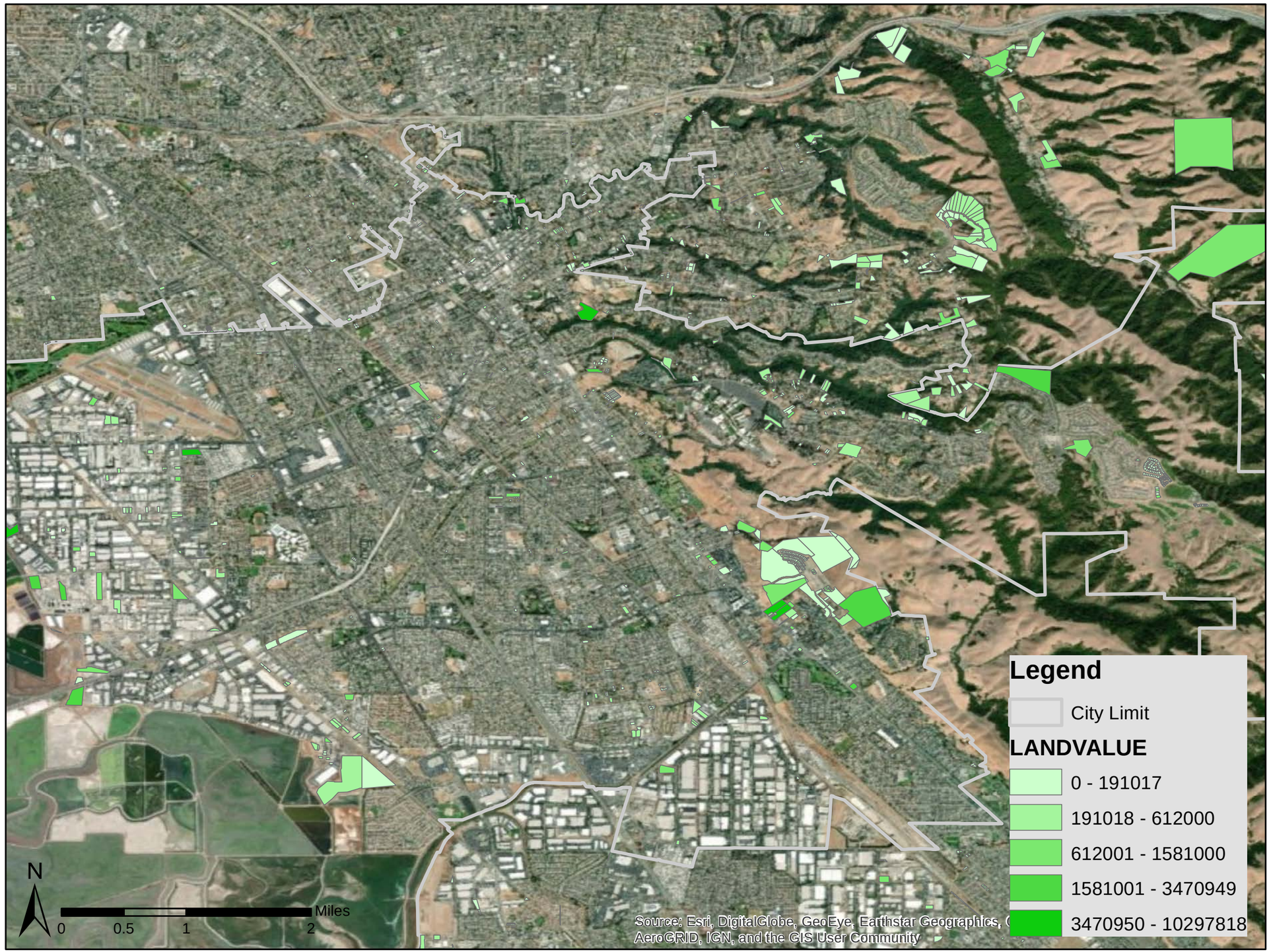
Suitability Analysis Values and Weighing			
Suitability		Constraints	
Public Amenities & Facilities	20%	Zoning	20%
Transportation	15%	Cost of Land	20%
Walkability	10%	Environmental Concerns	15%

Source: Christian Montoya & Krystal Sanchez

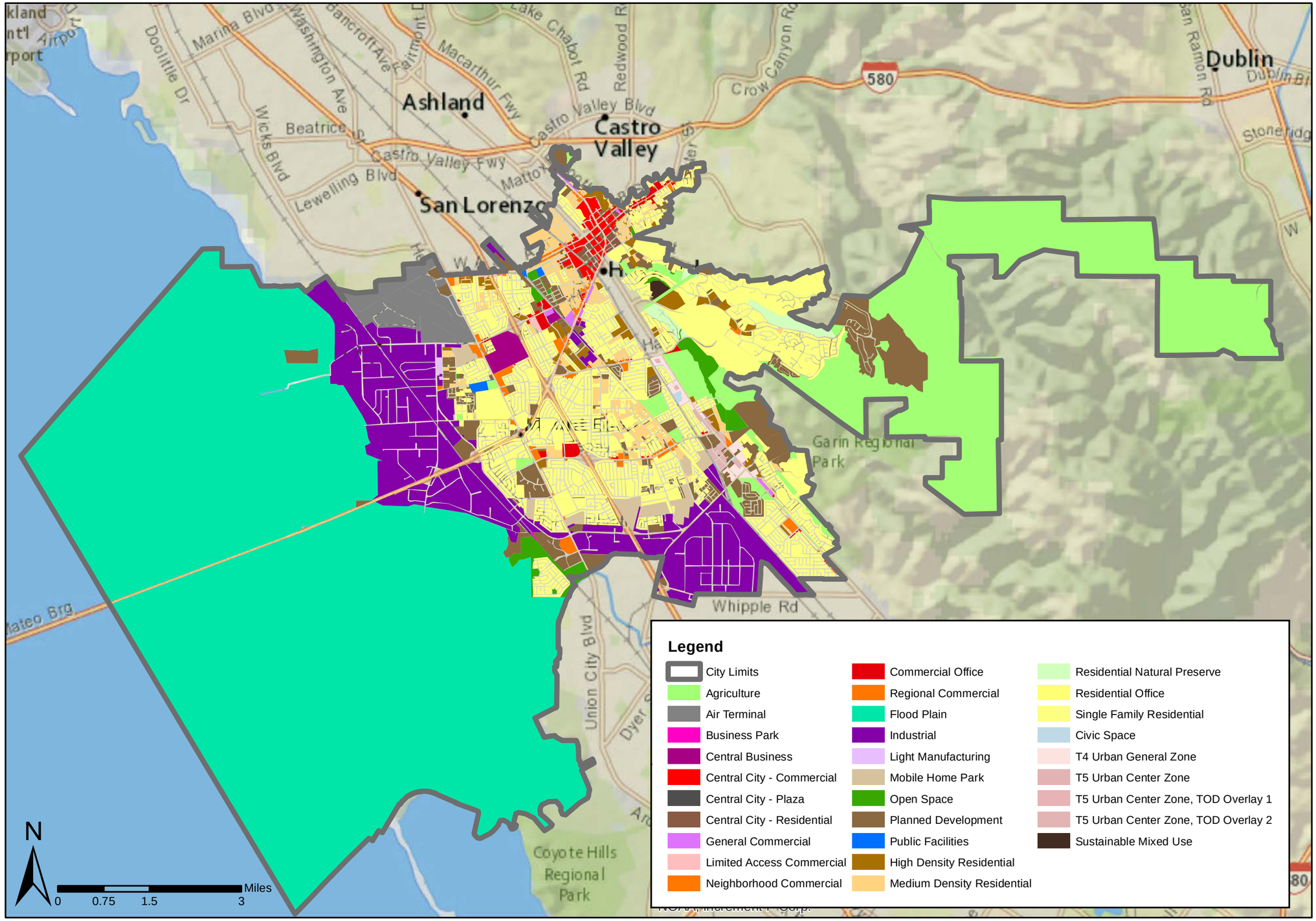
Vacant Parcels Map



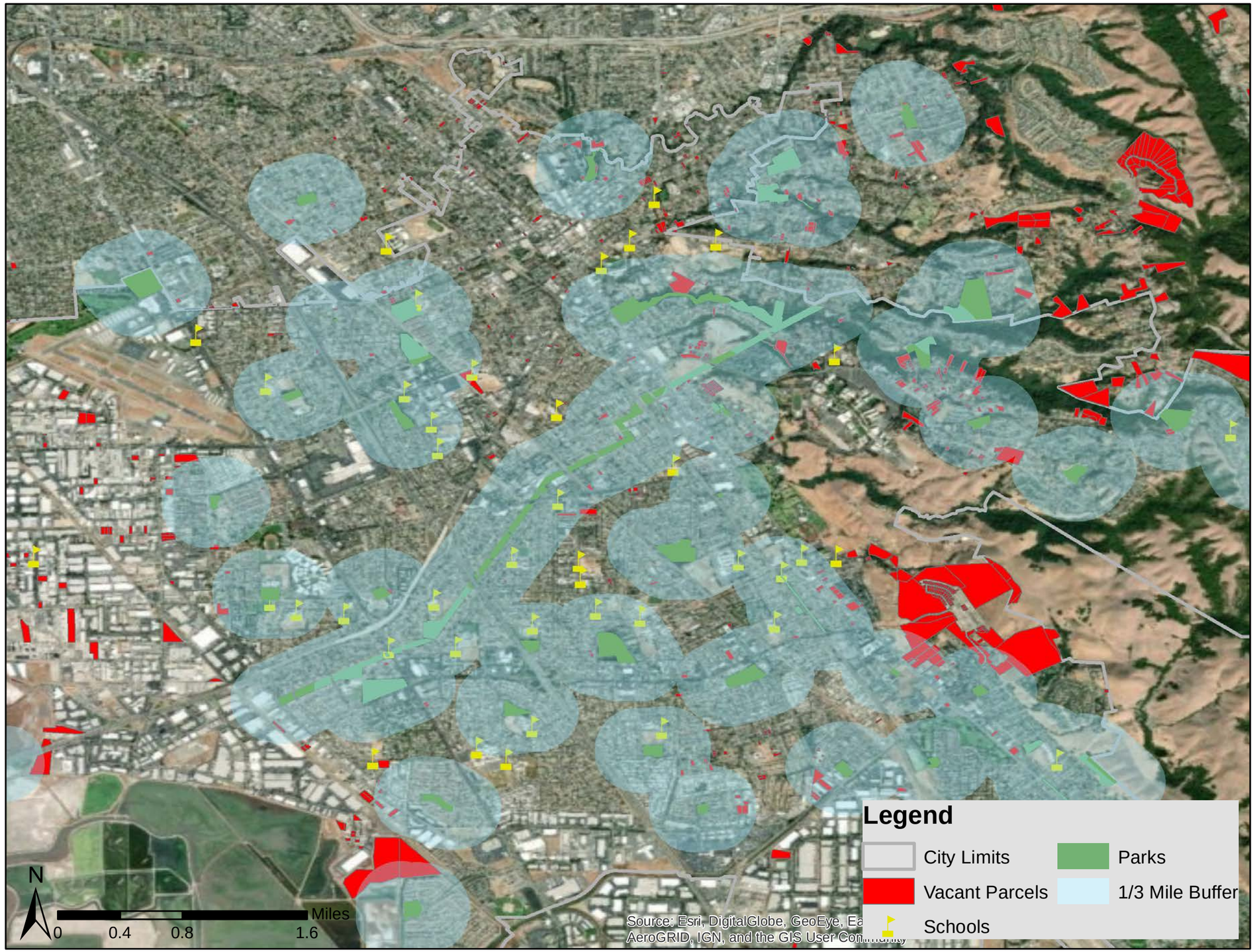
Cost of Vacant Parcels



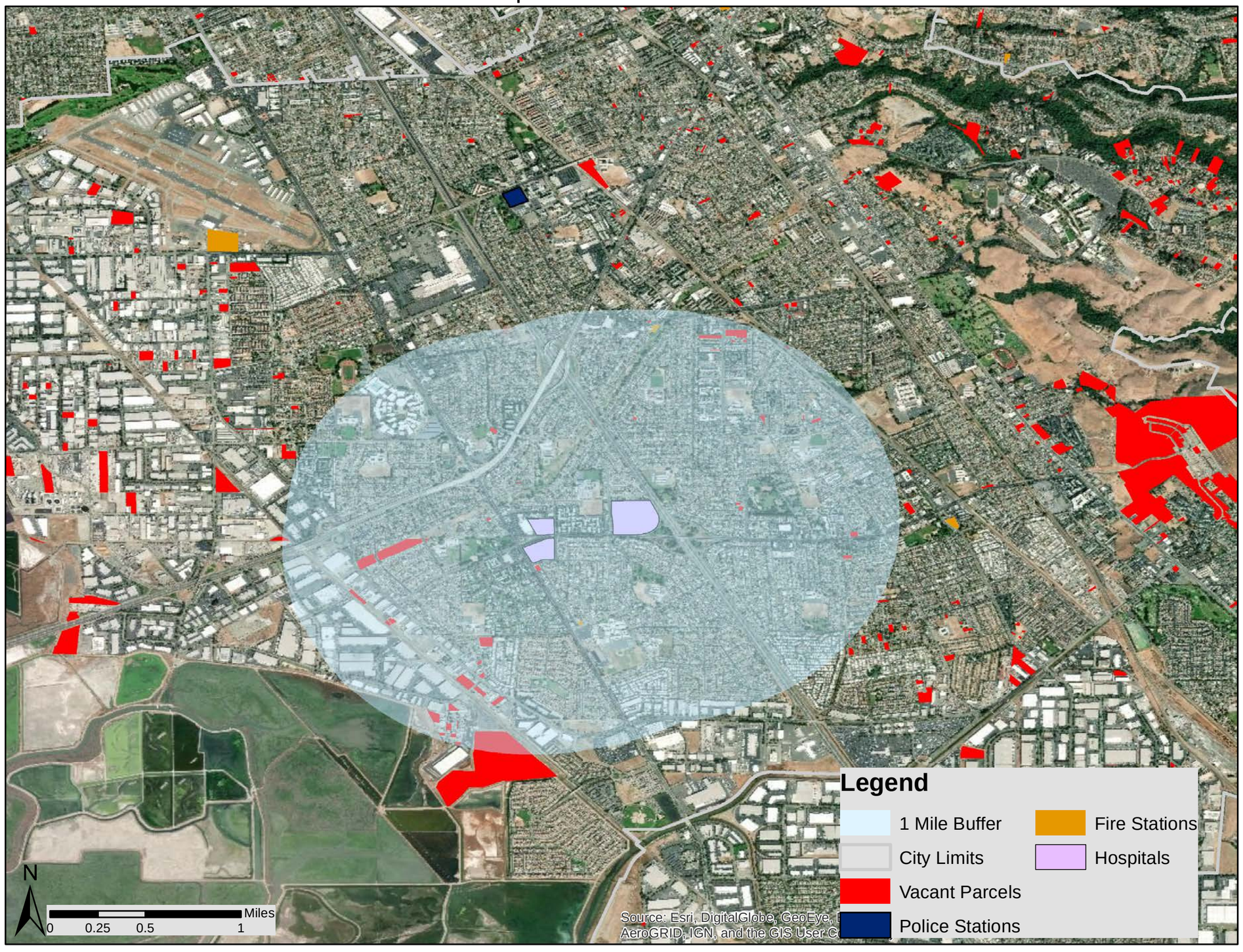
Hayward Zoning Map



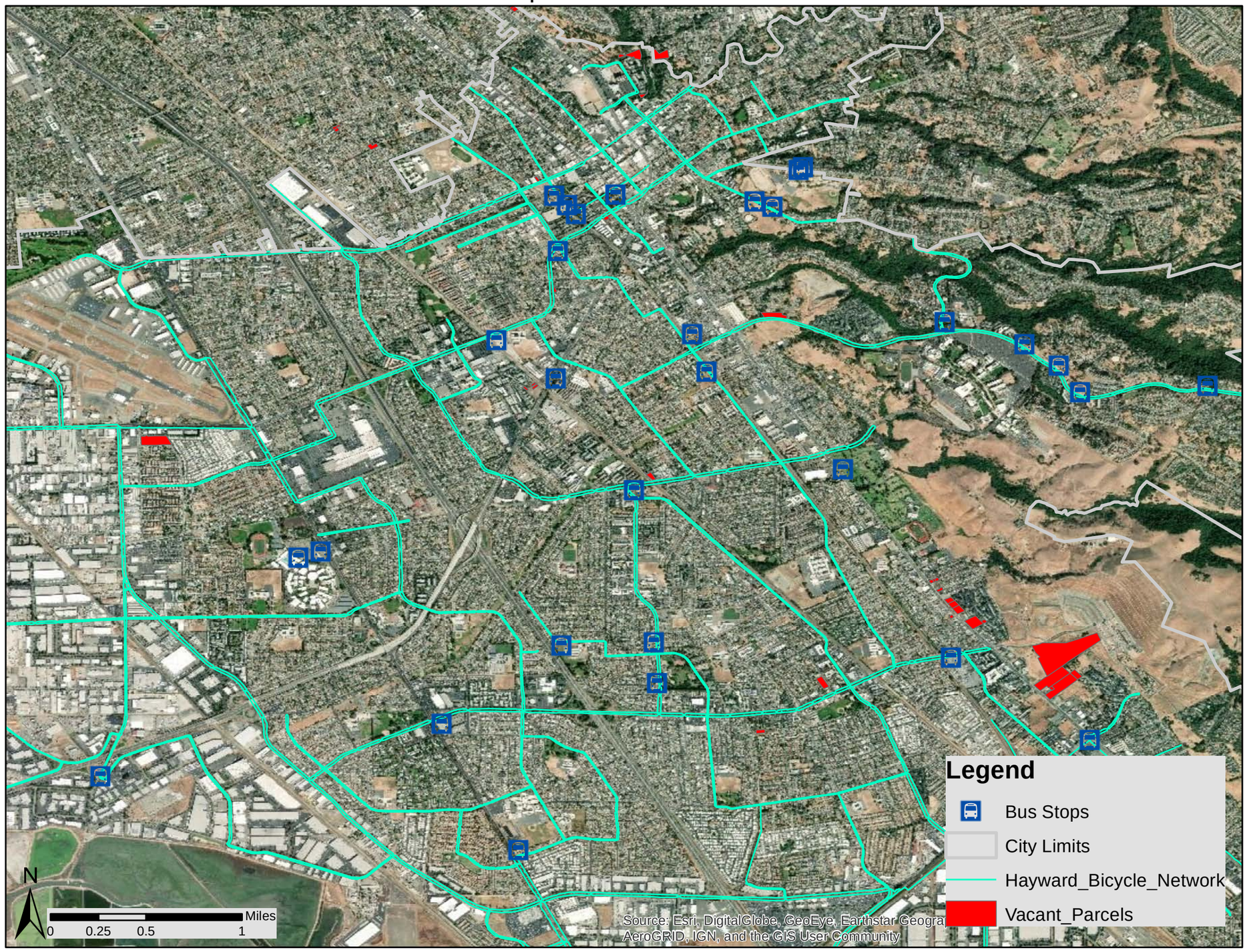
Public Amenities near Vacant Parcels



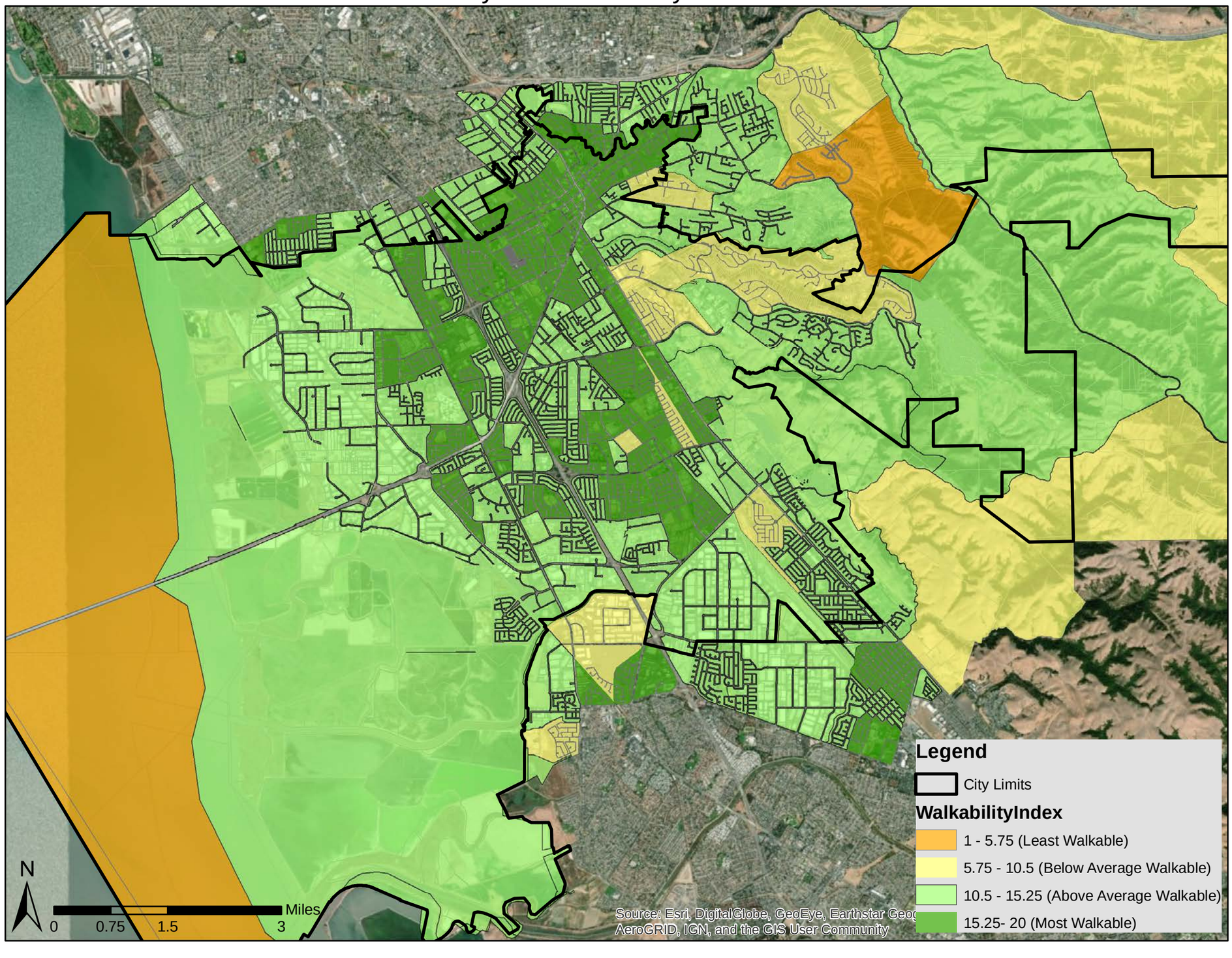
Important Facilities



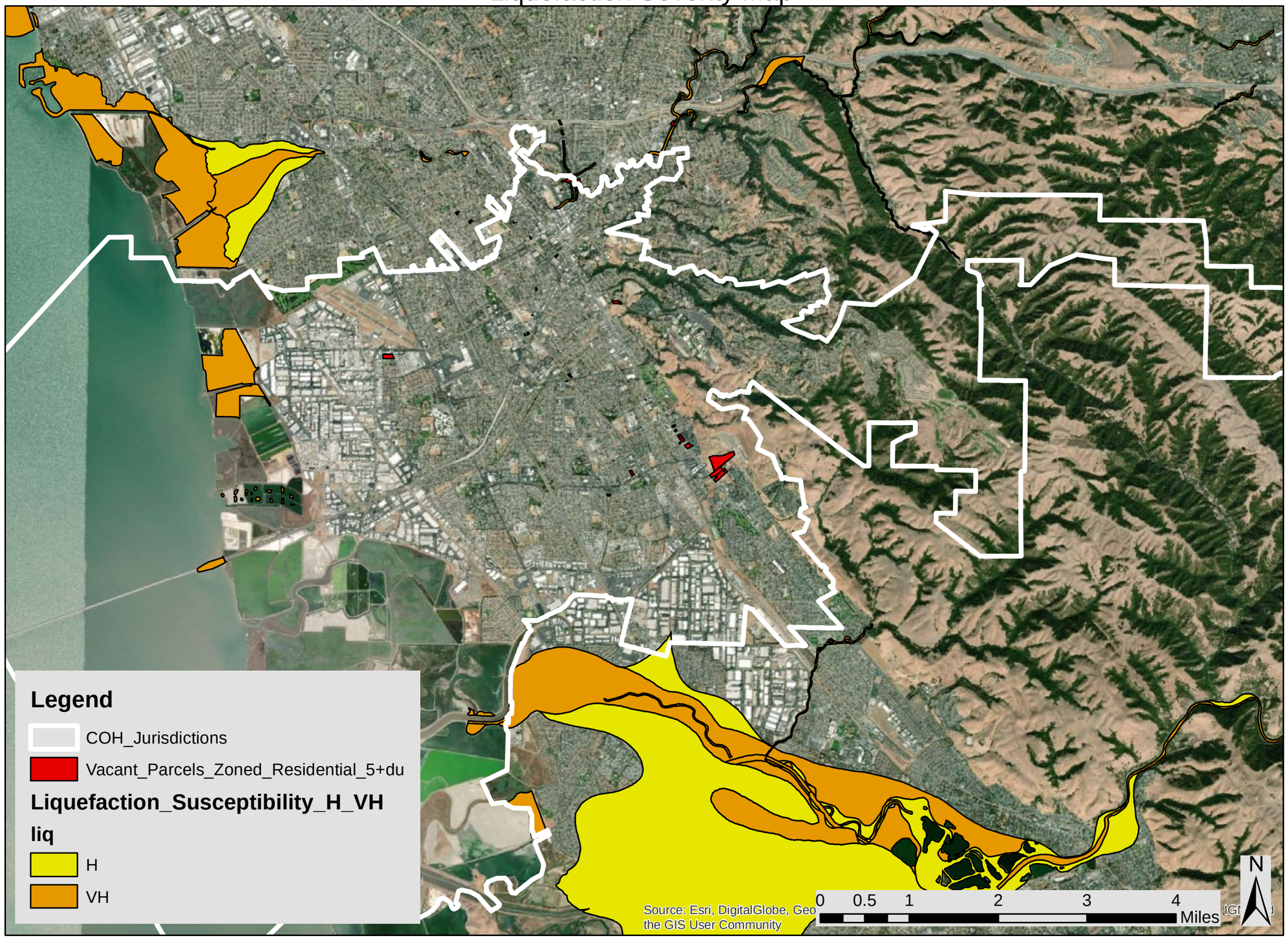
Transportation Network



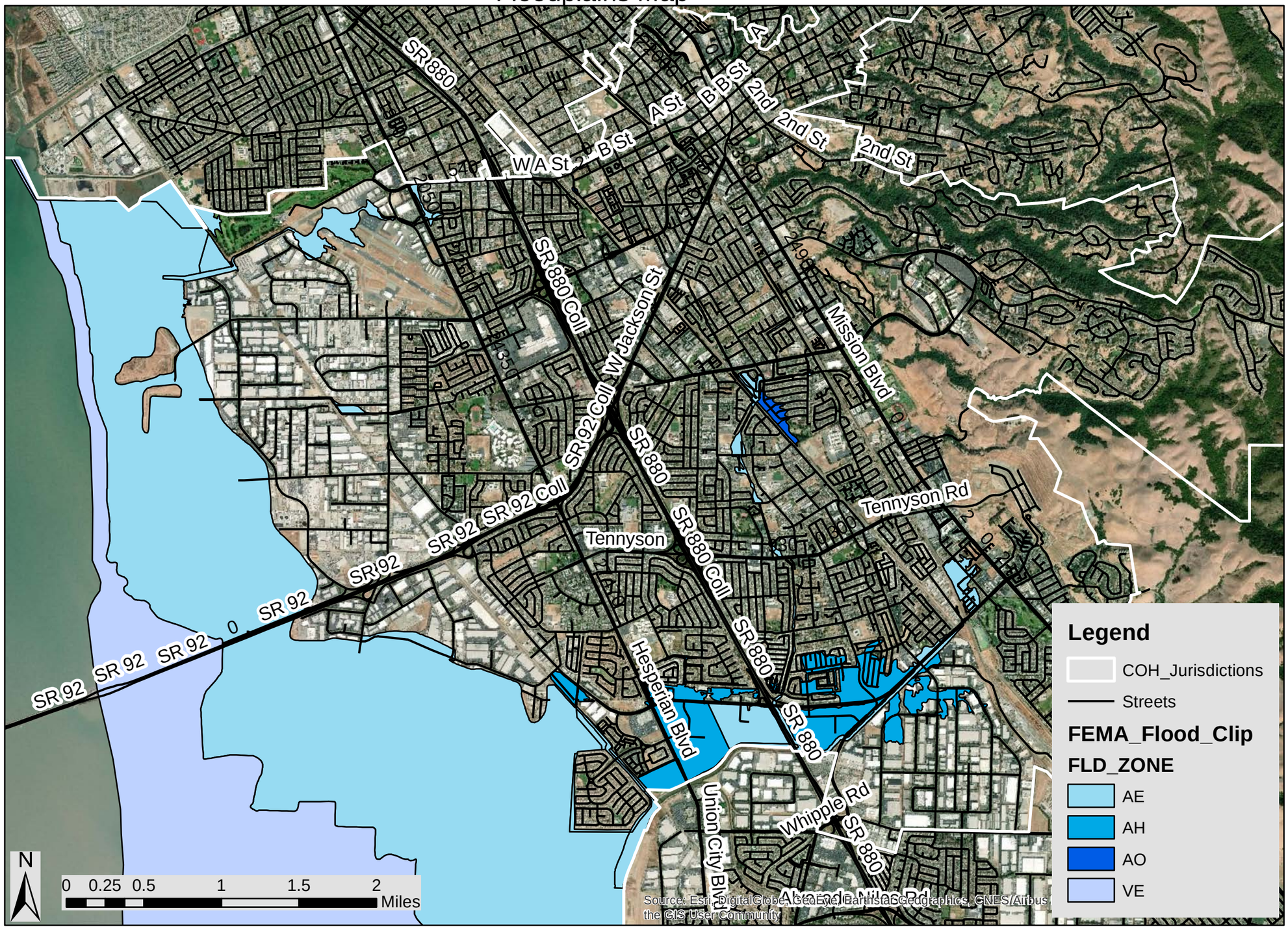
Hayward Walkability Index



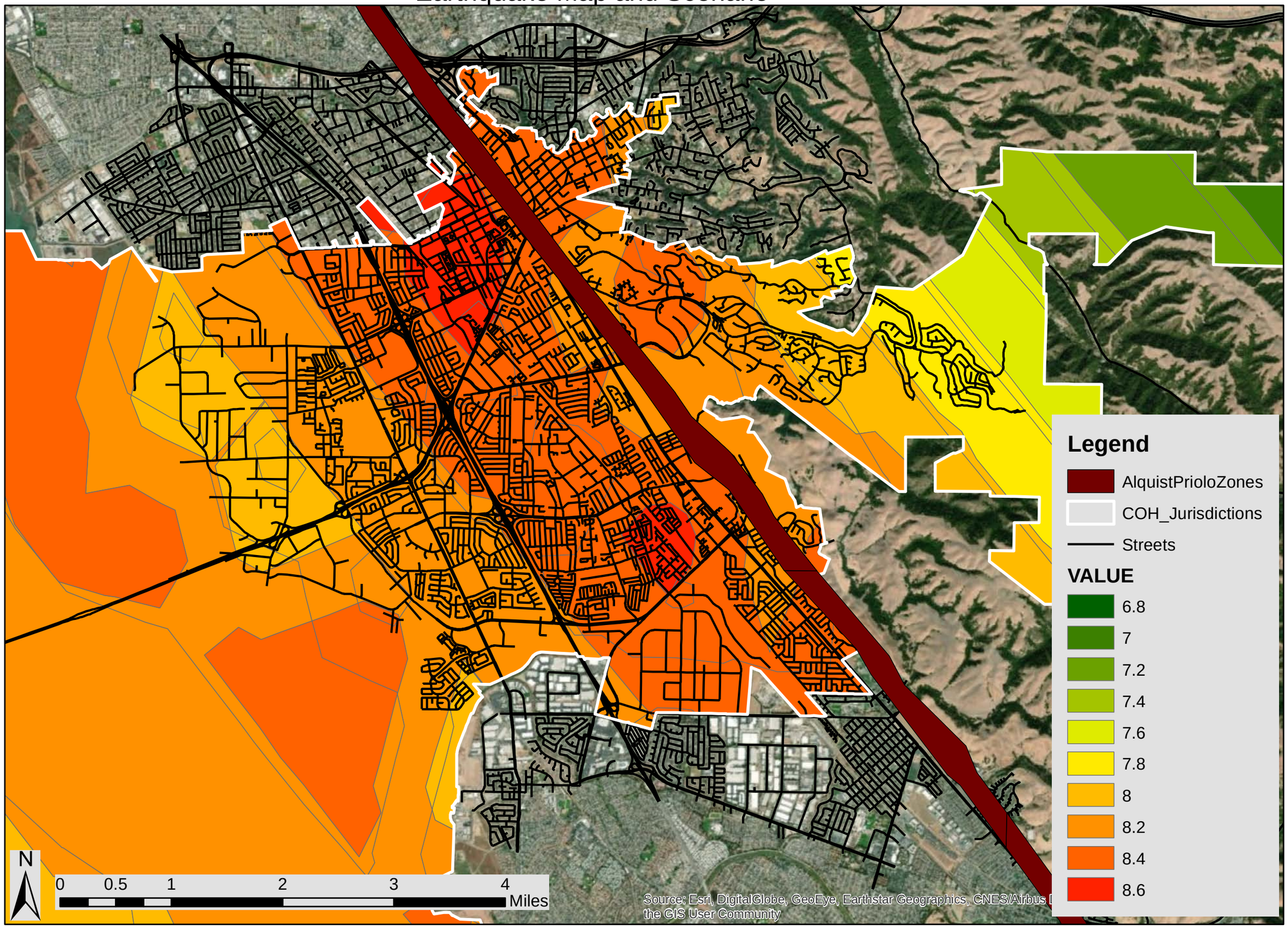
Liquefaction Severity Map



Floodplains Map



Earthquake Map and Scenario



Chapter Six

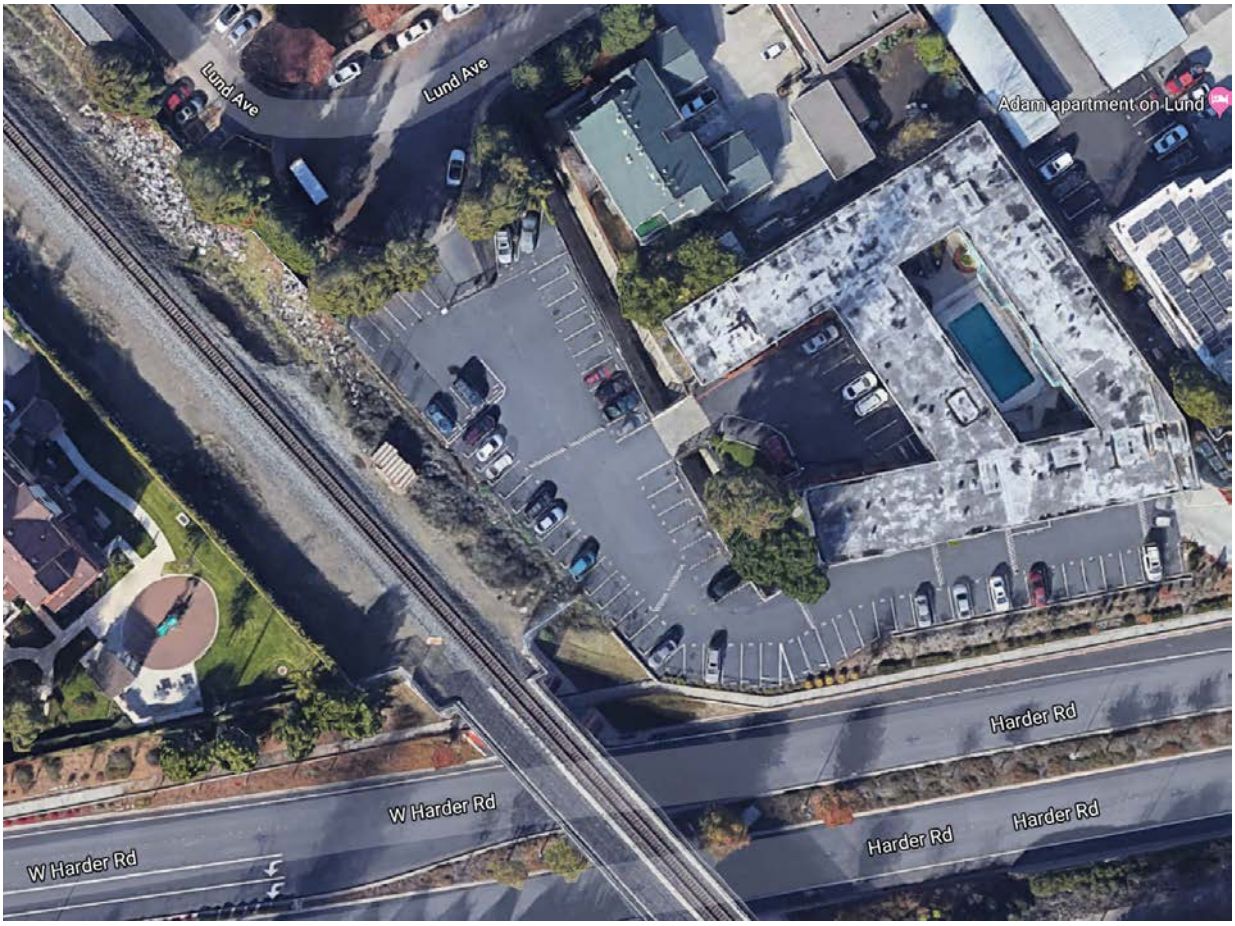
Site Recommendations

Site Location #1

Address: 27934 Manon Avenue, Hayward, CA 94544
Zoning: Medium Density Residential, minimum lot size 2,000sqft
Density: 5 or more units
Lot Size: 42,864 sq ft
Cost of Land: $432,900
Potential Unit Capacity: 20 units

While this parcel was a little more expensive than the other parcels chosen this parcel scored well on amenities, walkability and being out of environmental constraints. This parcel is within a ½ mile of schools, parks, and transportation. The walkability score was 10 and this parcel was only within the earthquake buffer but received the lowest score of 1. The parcel is surrounded by residential and commercial making it an even better choice to put an affordable multi family residential complex.

Site Location #2



Address: 95 Lund Avenue, Hayward, CA 94544
Zoning: High Density Residential, minimum lot size 750sqft
Density: 5 or more units
Lot Size: 22,915 sq. ft.
Cost of Land: $125,131
Potential Unit Capacity: 15

This site recommendation is for two parcels. We recommend that the two parcels be merged to allow access of a collector road instead of an arterial road. This will improve the safety of the residents living in the apartments when anything is built and pedestrians around the area. The second parcel is currently an underutilized parking lot this can be transformed to a smaller apartment complex. This would be a better use than just a parking lot. There are various design strategies and parking reductions that can allow a new apartment complex while still allowing enough parking for the area. This parcel scored better on land cost and meets the criteria for parks and schools amenities. Unfortunately this parcel is within the floodplain and has a higher score for earthquake susceptibility. This has to be taken into account when anything is built into the area.

Site Location #3

Address: 28244 Mission Boulevard, Hayward, CA 94544
Zoning: High Density Residential, minimum lot size 1,250sqf
Density: 5 or more units
Lot Size: 78,876 sq ft
Cost of Land: $30,704
Potential Unit Capacity: 15

This site is surrounded by existing commercial and high density residential. This parcel is currently vacant and zoned for high density residential. During the suitability analysis we were able to choose this site due to its proximity to amenities, lower price range and a good score on environmental factors. We also decided that this parcel would be suitable for a multi family housing project because of the surrounding infrastructure that is already in place to make it even easier to build a project here. The parcel frontage is along a major corridor but access can instead be directed from Hancock instead to be easier on residents. tHE developer can be creative in its design to allow high density while still catering to the needs of the residents. We think a well developed project can be developed here.

Chapter Seven
Conclusion

The main objective of this project was to complete a preliminary suitability analysis that included a variety of important factors that could be categorized as constraints or suitable features. By designating criteria inspired by our case studies and influenced by our knowledge of planning, we used the Weighted Linear Combination method to develop our suitability analysis on multifamily affordable housing developments within the City of Hayward.

Before analyzing the area, our team conducted research about the demographics and economy including the housing market, development trends, and regional economy. A brief review of the economic and housing conditions indicate that a primary challenge in building affordable housing is land constraints and that the best way to remedy this issue is to work with nonprofits and the City of Hayward's planning department to buy land a cheap as possible as seen in our case studies.

After completing Chapter 2, we derived a background for the City's housing conditions and its effects on its residents. Thus, we decided to do a needs analysis that would analyze the serious needs of low-income families within the City. The needs analysis was composed of information gathered from the City's Housing Element and the Regional Housing Needs Allocation. These two legal documents were essential in determining the local housing situation of low-income families in Hayward.

We completed this senior project in 10 weeks as part of our graduation requirements and provided a limited scope for educational purposes.

This project is not intended to be a complete and detailed analysis, but only a preliminary one. We acknowledge other suitability methods that could have been used, other criteria we could have used, and other sources of funding we could have investigated. Nevertheless, the model used proved useful in aiding to identify areas that show are suitable for the development of affordable housing.

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Appendix

Appendix A- Flood Map Zones

ZONE CLASSIFICATIONS

PLEASE PRINT A COPY FOR FUTURE REFERENCE

Zone C, Zone X - Areas determined to be outside 500-year floodplain determined to be outside the 1% and 0.2% annual chance floodplains.

Zone B, Zone X500 - Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. An area inundated by 0.2% annual chance flooding.

Zone A - An area inundated by 1% annual chance flooding, for which no BFEs have been determined.

Zone AE - An area inundated by 1% annual chance flooding, for which BFEs have been determined.

Zone AH - An area inundated by 1% annual chance flooding (usually an area of ponding), for which BFEs have been determined; flood depths range from 1 to 3 feet.

Zone AO - An area inundated by 1% annual chance flooding (usually sheet flow on sloping terrain), for which average depths have been determined; flood depths range from 1 to 3 feet.

Zone AR - .An area inundated by flooding, for which BFEs or average depths have been determined. This is an area that was previously, and will again, be protected from the 1% annual chance flood by a Federal flood protection system whose restoration is Federally funded and underway

Zone A1-A30 - An area inundated by 1% annual chance flooding, for which BFEs have been determined. .

Area Not Included (ANI),(N) - An area that is located within a community or county that is not mapped on any published FIRM.

Zone D - An area of undetermined but possible flood hazards.

Undescribed (UNDES) - Area of Undesignated Flood Hazard. A body of open water, such as a pond,lake, ocean, etc., located within a community's jurisdictional limits, that has no defined flood hazard.

Zone VE - An area inundated by 1% annual chance flooding with velocity hazard (wave action); BFEs have been determined.

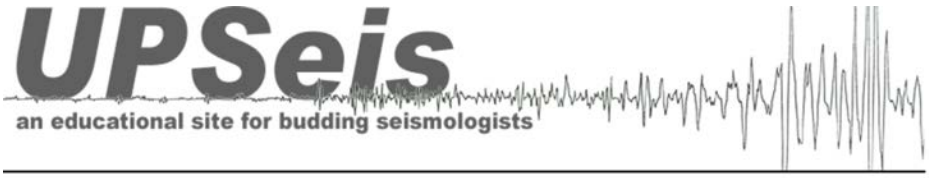
Zone V(1-30) - Costal flood with velocity hazard (wave action); BFEs have not been determined.

FWIC - An area where the floodway is contained within the channel banks and the channel is too narrow to show to scale. An arbitrary channel width of 3 meters is shown. BFEs are not shown in this area, although they may be reflected on the corresponding profile. (Floodway Contained in Channel)

100IC - An area where the 1% annual chance flooding is contained within the channel banks and the channel is too narrow to show to scale. An arbitrary channel width of 3 meters is shown. BFEs are not shown in this area, although they may be reflected on the corresponding profile. (1% Annual Chance Flood Discharge Contained in Channel)

500IC - An area where the 0.2% annual chance flooding is contained within the channel banks and the channel is too narrow to show to scale. An arbitrary channel width of 3 meters is shown. (2% Annual Chance Flood Discharge Contained in channel)

Appendix B- Earthquake Magnitude Scale and Classes



Earthquake Magnitude Scale

Magnitude	Earthquake Effects	Estimated Number Each Year
2.5 or less	Usually not felt, but can be recorded by seismograph.	900,000
2.5 to 5.4	Often felt, but only causes minor damage.	30,000
5.5 to 6.0	Slight damage to buildings and other structures.	500
6.1 to 6.9	May cause a lot of damage in very populated areas.	100
7.0 to 7.9	Major earthquake. Serious damage.	20
8.0 or greater	Great earthquake. Can totally destroy communities near the epicenter.	One every 5 to 10 years

Earthquake Magnitude Classes

Earthquakes are also classified in categories ranging from minor to great, depending on their magnitude.

Class	Magnitude
Great	8 or more
Major	7 - 7.9
Strong	6 - 6.9
Moderate	5 - 5.9
Light	4 - 4.9
Minor	3 -3.9

Appendix C- Tax Exempt Project Staff Report PDF

https://www.treasurer.ca.gov/ctcac/meeting/2018/20180321/staff/4/18-710.pdf