

## **Land Use Element**

Community Development Department

June 12, 2001

Approved by City Council Resolution  
July 3, 2001

*"Planning: process by which people set objectives, assess the future and Develop courses of action to accomplish these objectives"*

*"No plan can prevent a stupid person from doing the wrong thing in the wrong place at the wrong time, but a good plan should keep a concentration from forming"*  
(Charles Wilson, 1890-1960, Chairman of General Motors Corporation and U.S. Secretary of Defense)

*"Failing to plan is planning for failure"*

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## **I Background and Organization**

The panoramic view from the crest of Signal Hill is truly one of the most beautiful in all Southern California. Most spectacular is the view of the Pacific Ocean framed by the Palos Verdes Peninsula and the Sheep Hills at Newport Beach. This ocean view features rolling breakers at Huntington Beach, the Queen Mary and the Long Beach skyline arguably equally spectacular at night. To the northwest, Signal Hill vistas include the skyscrapers in downtown Los Angeles, the Hollywood sign and the Getty Museum of Art perched upon the Santa Monica Mountains. To the east the view is remarkably grand including the Long Beach Airport and the Pyramid at the California State University at Long Beach. Signal Hill is a special place that enjoys a certain sense of serenity above the surrounding urban plain. The residents of the City share many of the attributes of small town life: a true sense of community, peaceful residential neighborhoods, tree-lined streets, parks and trails and a vibrant community life. Signal Hill is a City with a clear view, and a clear vision of its future as defined in its mission statement:

### **Mission Statement**

*"Signal Hill is a small unique community that is economically independent, prides itself in personalized service to the residents and business community that it serves and a community which has created and works to maintain a high degree of livability for its residents."*

As in 1989 when the Land Use Element was last updated, vacant land remains Signal Hill's most important resource. Significant development has occurred in the past decade transforming an oil field and industrial city into a residential and light industrial community. This update of the Land Use Element builds upon the success of the past decade, establishes goals, policies and objectives for the planning period 2001-2015; and makes "build-out" development projections for 2020 and 2025 for population, household growth and employment.

The Land Use Element of the General Plan is Signal Hill's vision of its future and sets forth the means to protect the land use philosophy of the community, the character of its existing neighborhoods and the quality of the physical environment. Contained in the Land Use Element are criteria for the various land use types and the appropriate locations for each type of land use. Within each land use category are guidelines for the intensity of development, urban design concepts and standards for measuring the appropriateness of development proposals.

Signal Hill's land use pattern is well established and it is not anticipated to change materially over time. New development will occur within the vacant oil field areas and to a lesser extent in-fill development is anticipated in established neighborhoods. Significant constraints to development of the "oil patch" will continue to limit the availability of development sites and the rate of development. These constraints include: ongoing oil field operations, steep slopes, unsuitable soils, environmental

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contamination, lack of existing utility systems or the need to upgrade existing systems, small lot sizes, complex property ownership patterns, and a reluctance by traditional lending institutions to finance development of environmentally impacted properties.

### **Major Proposals**

Differences between the proposed Land Use Element and the existing Land Use Element (1989) are generally minor, though there are a few important proposals that should be noted:

- Heritage Square Central Business District concept for a mixed use intensive commercial and residential specific plan is added to the Commercial Town Center area located between 25<sup>th</sup> and Creston Streets and Rose and Cherry Avenues.
- Crescent Heights Historic District concept for a low-density residential specific plan located between Walnut and Gardena Avenues and 25<sup>th</sup> and Creston Streets is added to encourage the relocation and renovation of 1890-1930 vernacular architecturally significant dwellings in a neighborhood setting.
- Atlantic/Spring Neighborhood General Industrial District is added by changing the current Commercial Office and Commercial General land use designations in the area generally bounded by Atlantic and California Avenues and Spring and Willow Streets to include a General Industrial District generally located between Canton and 27<sup>th</sup> Streets and Olive and California Avenues and a CG - Commercial General District generally located between Atlantic and California Avenues and Spring and Canton Streets.
- Cherry Avenue Low Density District is added by deleting the current Mixed Use land use designation along Cherry Avenue, between the City boundary south of 19<sup>th</sup> Street and 21st Street and Cherry Avenue and the alley between Cherry and St. Louis Avenues.
- Total residential holding capacity increased from 10,070 to 11,286 persons.

### **Public Participation**

The citizens of the City of Signal Hill have participated in the formulation of "likes, dislikes and recommendations" for the future of Signal Hill through their loyal participation in half a dozen General Plan workshops held during 1999. Their input is recognized here as the most valued of all the information used in the formulation of clear and concise statements about what is right about the City and what needs to be fixed. Moreover, there is a strong desire of the citizens to maintain the peace, quiet and secure environment the City has managed to achieve and preserve at this time in its seventy years history.

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## **Legislative Authorization**

The California Government code requires all City General Plans to contain a Land Use Element. The Element should identify land use opportunities and constraints, promote a balance of land uses, and guide public and private development activities. Section 65302(a) of the California Government Code identifies the required content of the Land Use Element as follows:

"A land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open spaces, including agriculture, natural resources, recreation, enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall also identify areas covered by the plan which are subject to flooding and shall be reviewed annually with respect to such areas."

State law encourages cities to include issues of greatest local concern in the General Plan and Land Use Element. Accordingly, this Element focuses on the interface of oil production and other urban uses, the preservation of views and scenic vistas, and the orderly development of neighborhood shopping opportunities.

## **Relationship to Other Elements**

Of all the elements required in the General Plan the Land Use Element has the broadest scope and is key to the synthesis of the other State mandated elements including Housing, Circulation, Environmental Resources, Safety, and Noise. The Land Use Element has been prepared in conjunction with the update of the Housing and Circulation Elements and in full knowledge and consideration of the other elements including the Parks and Recreation Master Plan that has been adopted into the Signal Hill General Plan.

## **Organization and Format**

To help the reader in using the General Plan, the Land Use Element is structured around analysis of seven Neighborhoods (Section III) with discussions, and summaries from community meetings identifying general themes, characteristics and concerns that provide the basis for city-wide goals, policies and action plans/objectives. During a year-long community participation process, City officials, residents and businesspersons participated in a series of Neighborhood Workshops to discuss city-wide and neighborhood-level "likes and dislikes" and to provide recommendations for the land use plan. Constraints and Issues (Section IV) provide further policy recommendations based on background information and existing conditions relevant to land use planning. Synthesis of ideas begins in Growth Concept (Section V) where predicted and

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proposed growth scenarios are quantified. The land use plan for the community is described the Land Use Map (Section VI) and Special Management Areas Map (Section VII). The Land Use Map section provides further narrative detail on the land use classification plan and the allowed intensity of development. In Section VIII, broad goals are defined, along with policies to guide evaluation of future development proposals in the Goals and Policies (Section VIII). The Implementation Program (Section VIII) sets forth Action Plans/Objectives to implement the City's strategy for carrying out its land use plan. During annual general plan reviews, the City will compare its achievements to the Implementation Program Section to measure progress or to recommend midcourse corrections to the land use plan.

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### **II Trends**

Demographic and development trends are important to the formulation of land use policies. This section of the Land Use Element builds upon the information in the 1989 Land Use Update.

#### **Population**

Table 1 displays a relatively steady rate of population growth during the past several decades increasing approximately 100 persons per year, or an annual percentage increase of less than one percent. However, the City is currently experiencing unprecedented residential development in and around the hilltop area, and it is expected that during the period 2000 - 2005 the rate of population growth will exceed historic levels. The 1989 Land Use Element projected a maximum population of 11,232 assuming full development of all residentially zoned land in the City. The recommendations in this update of the Land Use Element would result in residential holding capacity of 11,286 persons. According to the State Department of Finance, in the year 2000 the population of the City was 9,247. The forecast for 2010 is a population of 10,471 in line with previous build out projections. Forecasts predict additional population growth beyond the build out of the City to a population of 15,182 in 2025.

**Table 1 - Population**

Year	1940	1950	1960	1970	1980	1990	2000	2010	2015	2020	2025
1*	3,184	4,040	4,627	5,582	5,734	8,371	9,247				
2*								10,471	11,896	13,432	15,182

\*1 U.S. Department of Commerce, Census Bureau, and State Department of Finance

\*2 Southern California Association of Governments Preliminary Regional Transportation Plan 2001 forecasts Update (February 2000)

#### **Economic**

National, state and local economic trends influence local economic conditions, and local conditions and land use policies tend to encourage or discourage economic development. The City of Signal Hill has a long tradition of policies that are "business friendly" including low business license fees and no utility taxes. As a low-or-no property tax city, Signal Hill has found it necessary to rely upon sales taxes to support local government activities. Table 2 compares per capita sales tax revenues collected by the Cities of Signal Hill and Long Beach and Los Angeles County.

**Table 2 - Sales Tax Revenues Per Capita**

	1980	1990	1999
Signal Hill	\$429	\$570	\$787
L A County	\$46	\$77	\$80
Long Beach	\$49	\$60	\$63

Source: Hinderliter, de Llamas and Associates, January 2001

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### Employment

Signal Hill has a large and growing employment base. The petroleum industry, including oil well tools (fish tools), pipe supply, and oil well servicing companies, were once a major local employer and influential force in the City. Today, retail and service related industries are the main employers. Moreover, businesses with less than five employees account for the greatest number of employment opportunities. Table 3 displays the top ten employers in 1990 and 2000 that reveals the trend away from petroleum and heavy industry to light manufacturing and service industries-especially retail sales.

**Table 3 - Top Ten Employers**

	1990	Type of Business	2000	Type of Business	Employees
1	Pacific Valves	Manufacturing	Universal Care	Medical/Admin.	624
2	General Telephone	Communications	Office Depot	Retail/Wholesale	533
3	Eastman Inc.	Office Supplies	Costco	Retail/Wholesale	288
4	Price Club	Retail/ Wholesale	Crane Co. y	Manufacturing	249
5	Petrolane Inc.	Offices	Home Depot	Retail/Wholesale	244
6	GEMCO	Retail/ Wholesale	Omniplex Wrld	Business Service	226
7	Willis Oil Tool	Oil Tool Service	Target	Retail	185
8	Hawk Industries	Manufacturing	Pac-Century	Bank Offices	122
9	Offco	Construction	Fed. Express	Delivery Service	116
10	Oil Well Serv. Co.	Oilfield Services	Jacobs/ Wolder	Engineering	108

Source: City of Signal Hill, Finance Department, 2001

**Table 4- Employment Forecast**

Year	Employment
2000	10,500
2010	10,961
2015	11,442
2020	11,944
2025	12469

Source: Gateway Cities Subregional Growth Forecast 2000 Community Development Department, January 2001

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### **Redevelopment**

In 1974, the City identified the entire Signal Hill oilfield a “blighted” area pursuant to State Redevelopment Law, and incorporated nearly two-thirds of the 2.2 square mile city as Redevelopment Project Area No. 1. Established neighborhoods, now some of the oldest in the City were left outside of the project boundaries shown in Figure 1. During the 1970's and 1980's, the Agency focused most of its attentions on infrastructure improvement projects, including water, sewer, storm drain and street improvement projects. In the 1980's, the Agency shifted its focus to economic development. Notable projects assisted by the Agency's economic development program include: Price Club (Costco), Office Depot (formerly Eastman Company), Home Depot, Toy's-R-Us, Office Max and several dealerships in the Signal Hill Auto Center. During the past decade, the Agency also focused on the development of affordable housing including Sea Breeze Manor, Signal Hill Village, East Village, and the proposed Town Center West Senior Housing. Other Agency programs such as the first-time-buyer assistance program and housing rehabilitation grants have helped to upgrade the condition of the local housing stock.

Agency activities, especially economic development projects, help drive the land use process in Signal Hill through implementation of a three-part economic development program including business retention, business expansion, and business attraction. Development of the oil field is extraordinarily complicated by fragmented ownership patterns, soils contamination, and infrastructure requirements. Accordingly, the Agency has had and will continue to have significant influence on land use patterns, housing opportunities, and the quality of architecture and urban design features of the City.

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**Figure 1 - Redevelopment Project Area**

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### **III Neighborhoods**

This section discusses the City in terms of seven neighborhoods: 1-North End, 2-Central, 3-West Side, 4-Civic Center, 5-Southeast, 6-Hilltop and 7-Atlantic/Spring. Figure 2 displays the boundaries of these neighborhoods



#### **1. North End Neighborhood**

Shady tree lined streets, comfortable cottage homes, and a walk in the park describes life in the North End Neighborhood. Chinese Elm trees, both loved and despised by local residents, provide a canopy of foliage above a grid of wide streets and alley ways. The North End Neighborhood was a well established suburb of Long Beach before the incorporation of the City of Signal Hill in 1924, and many of the dwellings there were relocated from the oilfield to make way for further petroleum exploration. The Signal Hill Oil Field traverses the City from northwest to southeast and forms the westerly boundary of the North End Neighborhood along with a Target retail store and several blocks of light industrial development. The entire neighborhood lies north of the I- 405 freeway (1962) that separates the neighborhood from the rest of Signal Hill. The City was successful in requiring the designers of the freeway to place it below grade in this stretch so that is a somewhat less dominate feature than elsewhere in the region. Unfortunately, off-ramps at Atlantic and Orange Avenues spill unwanted traffic into the neighborhood. In 1998, the State responded to City and resident's long-standing requests and shared the construction costs for a sound wall along the north side of the freeway.

The residential lot size in the North End Neighborhood is relatively large, typically 6,375 square feet, and most lots have both street and alley access. The design of the individual houses varies from classic Spanish to Victorian and Craftsman. Typical post World War II tract style homes, single-story stucco with metal frame windows and composite shingle roofs are commonplace. Garages are thoughtfully placed to the rear of the lot, with the access provided via an alley. This site design de-emphasizes the role of the automobile typical of modern suburban neighborhood streets too often

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dominated by rows of driveways and garage doors. Many properties have one or more rental dwellings in addition to the main dwelling.

Prior to 1985, the Crane Company (formerly Pacific Valves) operated a foundry at Walnut Avenue and 32<sup>nd</sup> Street. It was partially replaced by a modern light industrial park in 1985. This project sparked much controversy at the time of its development, but its exemplary design, landscaping and maintenance make it a good neighbor for nearby residents who rarely complain about its effect on the neighborhood. To the east of Walnut Avenue lies a City of Long Beach Water Department facility, with its broad landscaped yard that provides a pleasing east edge for the North End Neighborhood. The north boundary of the neighborhood is located 90-feet south of Wardlow Road, and the shops fronting on Wardlow Road obtain business licenses from the City of Long Beach. Apparently, the founders of the City avoided responsibility for maintaining Wardlow Road by drawing the City boundary 90 feet south of the road. This same boundary arrangement is found along Atlantic Avenue.

Public facilities and institutions located in the North End Neighborhood include Burroughs Elementary School and Reservoir Park. The southerly half of the park is a five million-gallon reservoir and pump station. In contrast to the otherwise exclusively single-family character of the North End Neighborhood, there is a concentration of two-story apartment buildings on 32<sup>nd</sup> Street near California Avenue. The following are comments from the residents who attended the North End Neighborhood workshop:

***What North End residents like:*** *Nice homes and trees, picturesque streetscapes, security and cleanliness*

***What they don't like:*** *An increasing number of rentals, cut through traffic, trucks and noise, lack of property maintenance.*

### ***Recommendations:***

- *The City needs to promote home ownership as the preferred form of tenancy.*
- *The City needs to encourage or require all property owners to maintain their property.*
- *The City should work with the neighborhood on a "traffic calming" plan to mitigate cut-through traffic and reduce traffic impacts like noise, odors and dust*

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**Figure 2 - Neighborhoods**

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### **2. Central Neighborhood**

The Central Neighborhood lies south of the I-405 freeway between Temple and California Avenues. Willow Street is the southerly boundary of the Central Neighborhood except that the Hathaway Tank Farm and industrial complex between Hathaway and Redondo Avenues is included in the Central Neighborhood. During the oilfield boom years (1923-1965), the Central Neighborhood served as a vast storage yard for the oil field. Principle businesses included pipe and equipment storage yards, oil tool (fish tool) companies, petroleum refineries and tank farms. As production declined, the major petroleum companies Shell, Texaco and Arco sold their interests in the Signal Hill oil field, and concurrently relinquished the surface rights back to property owners more interested in alternative forms of urban development. Several of these storage yard businesses remain unattractive reminders of Signal Hill's colorful past.

Small size industrial lots, narrow streets and alleys and obsolete industrial buildings make the Central Neighborhood a congested place to do business. While it is a convenient location for commerce near the airport and several freeways, it lacks the infrastructure necessary to accommodate large tractor-trailer size trucks that compete with smaller vehicles for road space and parking. The viability of the Central Neighborhood as the City's employment hub will depend on the City's success in limiting the growth of businesses involving fleets of tractor-trailer size trucks that tend to impede the free flow of smaller vehicles.

In the 1970's, developers found the Central Neighborhood of Signal Hill, an ideal location for development of high-quality light industrial space. Attributes of the location include freeway access midway between Los Angeles and Orange County business districts, proximity to two ports, Long Beach and Los Angeles, and adjacency to the Long Beach Airport. Table 5 displays the growth of commercial and light industrial space in the City during the past several decades.

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**Table 5 - Commercial and Industrial Buildings**

	Number of Projects	Total Square Feet
1971 - 1980	83	1,199,429
1981 - 1990	106	1,005,366
1991 - 2000	<u>64</u>	<u>901,712</u>
Totals:	253	2,106,507

Source: Building Division, Community Development Department, January 2000.

The Central Neighborhood also includes the Signal Hill Auto Center located along Spring Street and Cherry Avenue. Nine new car dealerships are currently represented with plans to add two more in the year 2001. The City/Agency plans for continued growth of the Auto Center as more sites become available along Spring Street or Cherry Avenue. Auto Center Design Guidelines and the Spring/Cherry/Willow Corridors Landscape Design Standards will continue to guide development of the Auto Center which provides an attractive edge for the Central Neighborhood and a palm tree lined gateway corridor leading to the Town Center. Entertainment and many services are also available in the Central Neighborhood. Most notably, the On the Green fairgrounds developed by the Signal Hill Chamber of Commerce hosts a summer evening concert series and weekly farmers market. A wide range of neighborhood services are also available in the Central Neighborhood including auto repair, banking, delicatessens, fitness center, trade schools, upholstery, picture framing, and welding. The Commercial/Industrial Zoning District designation given to many Central Neighborhood properties recognizes that retail sales is an important accessory component of many light manufacturing, warehousing, distribution and service businesses. The following are comments from the property and business owners who attended the Central Neighborhood workshop:

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***What Central Neighborhood business owners like:*** Safe area for business activity, good freeway access, low business license taxes, no utility taxes.

***What they don't like:*** Unattractive storage businesses, increasing traffic and congestion.

### **Recommendations:**

- *The City should encourage the transition of "unattractive" storage yards to other land uses like light industrial parks.*
- *The City should discourage businesses that increase traffic and congestion especially businesses involving fleets of large tractor trailer truck, large vans or buses.*
- *The City should discourage development of port related cargo terminals, container storage yards, and trucking businesses.*

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### **3. West Side Neighborhood**

The West Side Neighborhood is located south of Willow Street between Orange and the abandoned Pacific Electric Railroad right-of-way. It includes a mix of older industrial and residential land uses on small size lots with scattered oil field operations.

Compared to the other neighborhoods the West Side Neighborhood appears less spatially organized than other parts of the City with more rental properties and fewer well kept buildings and lawns. The West Side Neighborhood has a lower income population, more dwellings in need of repairs, less landscaping and fewer trees. The residential core of the West Side Neighborhood is located on Cerritos, Lemon and Lewis Avenues between 23<sup>rd</sup> and Burnett Streets. This residential enclave has many unique historic dwellings, and some painstakingly restored by their owners. Notable structures include the barn-like dwelling at 2289 Lemon Avenue that was once a community playhouse. Unfortunately, industrial uses including several unsightly storage yards surround these dwellings and detracts from the quality of life of the neighborhood.

There are more apartment buildings located in the West Side Neighborhood than elsewhere in the City. Among these apartments, the Las Brisas Apartments located along California Avenue north of Burnett Street is among the City's most troubled residential areas. Police and Code Enforcement efforts to force property owners to improve the Las Brisas Apartments have largely failed to address lingering problems with absentee and undercapitalized property owners. The Agency has begun to implement a comprehensive revitalization plan for the Las Brisas Apartments to purchase and renovate the 152-unit complex and introduce single ownership and strong property maintenance and management. The proposal includes a small neighborhood park and may include a community center or day care center.

The West Side Neighborhood is affected by the appearance of Orange Avenue, a corridor lined with storage yards and auto repair businesses. In 1998, the City

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approved a property maintenance ordinance requiring property owners along Orange Avenue to improve the appearance of their properties by painting buildings, constructing screen fences, and planting landscaping. This ordinance was associated with the relaxation of zoning standards for street dedications and building setbacks. Moreover, the General Plan Circulation Element designation for Orange Avenue was downgraded from Major Highway (100-foot right-of-way) to Secondary Modified Highway (70-foot right-of-way). The appearance of the Orange Avenue corridor has improved as a result of the changed ordinance and new development projects including the Signal Hill Golf Center, a golf driving range that added several acres of green space to the Westside Neighborhood. The following are comments from residents and business owners who attended the West Side Neighborhood workshop:

***What West Side Neighborhood residents like:*** *Home ownership opportunities and affordable restorable houses, responsive Police Department, good access to schools and shopping.*

***What they don't like:*** *Lack of neighborhood shopping opportunities, dilapidated apartments.*

### **Recommendations:**

- *The City should encourage home ownership and homeowners efforts to repair and restore existing housing.*
- *The City should encourage further development of neighborhood shopping opportunities.*
- *The Agency needs to complete the acquisition and renovation of the Las Brisas apartments, and establish a common ownership and management structure to ensure consistent maintenance.*
- *The City should complete the General Plan, Park Master Plan recommendations and develop a West Side Park.*
- *The City should consider ways to improve the interface or create buffer areas between the existing commercial/ industrial land uses and the existing residential neighborhood.*

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### **4. Civic Center Neighborhood**

The Civic Center Neighborhood takes its name from the many public institutions located between Cherry and Walnut Avenues and Willow Street and the southerly City boundary along the abandoned Pacific Electric railroad right-of-way. Public institutions located in the Civic Center Neighborhood include: City Hall, Police Station, Library and Community Center all surrounding Signal Hill Park, the largest park in the City. Long Beach Unified School District operates three schools in the Civic Center Neighborhood; Signal Hill and Alvarado elementary schools, the oldest and newest elementary schools in the City respectively, and the Preparatory Academy junior high school that is planned for replacement. The Civic Center Neighborhood also includes the Town Center West commercial center.

In the vicinity of City Hall, the Civic Center Neighborhood contains a mix of older homes and contemporary condominiums, some of which capture views toward the west of the Palos Verdes peninsula and Long Beach skyline. This neighborhood used to be influenced by the negative visual and air quality affects of the Chemoil (formerly MacMillan) oil refinery on Walnut Avenue south of Hill Street. The refinery and associated tank farm were demolished in 1999, and the site remains vacant today. Considerable soils remediation work will have to be completed to make the site suitable for development. Given the constraints to development, the most feasible use of the old refinery site may be light industrial business park type uses.

Overlooking the City Hall area is the Crescent Heights residential neighborhood that takes its name from the original subdivision map of that area. Here are several fine historic homes constructed before the discovery of oil on Signal Hill or in some instances moved to Crescent Heights from elsewhere in the oil patch. The owners of these dwellings have expressed interest in the creation of a historic district to encourage repair and renovation efforts and attract further historic house relocations to the neighborhood. Crescent Heights commands ocean views to the south and southwest and the neighborhood is close to neighborhood shopping opportunities at the Town Center.

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In recent years, the City has turned away from focusing exclusively on retail sales tax generating businesses like the Costco and Home Depot found in Town Center East and more toward a neighborhood-shopping venue. The Town Center West shopping center, planned for completion in 2001, includes a grocery store, beauty supply shop, coffee house, sit-down and fast food restaurants and a service station. Town Center West also mixes urban uses with a large senior-housing component planned for a view-oriented site located adjacent to the neighborhood shopping center. This type of development helps achieve affordable housing goals described in more detail in the Housing Element, and provides a built-in population base necessary to support neighborhood businesses. The following are comments from residents who attended the Civic Center Neighborhood meeting:

***What Civic Center Neighborhood residents like:*** Peaceful quiet neighborhoods, neighborhood services and shopping, historic houses, small town history.

***What they don't like:*** Traffic congestion by schools, dusty lots, too much "big box" and "fast food", overhead utilities, lack of neighborhood shops and restaurants.

### **Recommendations:**

- *The City should encourage the repair and renovation of architecturally or historically significant houses by creating incentives to relocate dwellings into the Crescent Heights area.*
- *The Crescent Heights neighborhood should be given a special designation and a Specific Plan should be prepared to establish precise district boundaries, strict guidelines for design, landscaping, house moving projects, etc.*
- *The City lacks a true Central Business District and needs a bold new high-intensity commercial environment to serve our growing community. Accordingly, it is recommended that the City encourage the development of a Central Business District envisioned as a diverse, view oriented, intensely developed, pedestrian friendly shopping and dining venue with small shops and services, sit-down and outdoor dining opportunities, and community facilities. Residential lofts/ apartments and mixed-use structures will be permitted in multi-story configurations as an incentive to achieving public amenities like a town square or a public viewing area. The essential elements of the Central Business District include curbside parking, wide sidewalks, shops with a lot of windows, doors open to the customers, and outdoor merchandize displays. The Central Business District will capitalize on the existing retail environment by providing additional specialty retail shops and services. It will also provide a rest stop for hilltop hikers and a walk-to-shopping and*

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*dining venue for the residents of the adjacent Crescent Heights and Promontory neighborhoods.*

- *The City should investigate funding mechanisms for undergrounding overhead utilities especially where the undergrounding of overhead wires and poles will help to improve public or private views.*
- *The City should coordinate traffic circulation studies and traffic enforcement efforts with the Long Beach Unified School District to improve pedestrian safety and traffic flow in vicinity of Signal Hill School.*

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### **5. Hilltop Neighborhood**

Hilltop residents enjoy living on the high ground well above the surrounding landscape where they enjoy the benefits of breathtaking panoramic views, but they also endure certain annoyances from outsiders visiting the hill who add traffic and exasperate parking congestion. Hilltop Neighborhood development consists of view oriented single-family dwellings and condominiums on the top of the hill, Willow Ridge condominiums on the north side of the hill, Town Center East with Costco and Home Depot, the condominium buildings on the south slope of the hill including the condominiums on Molino and Temple Avenues north of 19<sup>th</sup> Street, Bixby Ridge and California Crown single-family homes east of Temple Avenue. The boundaries of the Hilltop Neighborhood are Willow Street on the north, 21<sup>st</sup> and 19<sup>th</sup> Streets on the south, Cherry Avenue on the west and Hathaway and Obispo Avenues on the east.

Development of the remaining vacant land in the Hilltop Neighborhood began in earnest in 1999 with the Bixby Ridge gated community of small-lot homes on the east flank of the hill, followed by the Promontory on top of the hill. These residential development projects were made possible after the City initiated Hilltop Neighborhood infrastructure improvements including the construction of two water reservoirs, the Hilltop Park and the consolidation of antenna facilities. As a part of the effort to develop the Hilltop Neighborhood, the City coordinated the consolidation of seven telecommunications sites and nine antenna towers into a single antenna consolidation site occupied by two antenna towers. The City of Long Beach operates a large telecommunications facility serving the needs of public safety, schools, transportation and utility providers, and Mountain Union Telecom operates a smaller tower serving private service telecommunications providers of wireless services and KLON, an FM radio station. The Federal Communication Commission (FCC) regulates the safety of radio broadcasts from these facilities.

The Hilltop Neighborhood is planned to develop in accordance with the Hilltop Area Specific Plan which calls for a mix of single family detached dwellings and view oriented

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condominium flats. These planned residential areas will be traversed by walking and hiking trails that will link the Hilltop, Sunset View and Discovery Well neighborhood parks to the Civic Center, Signal Hill Park, the Community Center and Library and the Town Center shopping district.

Existing Hilltop Neighborhood residential development provides a range of housing opportunities from small condominiums to large view oriented single family dwellings. Scattered among these residential dwellings are operating oil wells and at least two nonconforming office/ manufacturing buildings held over from an earlier era when the hilltop was zoned industrial. The remaining vacant land in the Hilltop Neighborhood includes oil field land in the vicinity of Obispo Avenue and 20<sup>th</sup> Street zoned for single family detached dwellings and the north facing slope of Signal Hill that is zoned for 120 four-plex dwellings. The Central Drill Site is also located on the north side of the hill at Temple Avenue and Combellack Drive. This facility separates water from the petroleum produced in the oil field. Accordingly, it will remain active in the foreseeable future. The City may want to study the Planned Development Area-2 zoning that applies to the Central Drill Site because the standards are difficult to apply to new development proposals. The Sierra Club and the property owner are also studying the feasibility of establishing a thirty-five acre open space conservancy area on the north side of Signal Hill to preserve habitat and walking trails.

In the next few years, the hilltop neighborhood will be transformed by significant residential development envisioned in the Hilltop Area Specific Plan (1991). This development will involve grading of the hillsides, construction of retaining walls and pads for new dwellings. Impacts on existing view are anticipated, as vacant lots become home sites. The following are comments from residents who attended the Hilltop Neighborhood workshop:

## **Land Use Element**

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**What Hilltop Neighborhood residents like:** The view, sea breezes, peace and quiet, walking and hiking trails, proximity to Civic Center and parks, progress and beauty of new development.

**What they don't like:** Undeveloped weed filled lots, trees that block the views, unimproved roads, noisy oil wells and aircraft, lack of parking, existing high-density housing, too many hikers in the streets.

### **Recommendations:**

- *The City should encourage the continuation of the development of the hilltop with high-quality housing.*
- *The City should require developers to pay their fair share for improving roads and infrastructure related to their projects.*
- *The City should follow the recommendations in the Hilltop Area Specific Plan regarding landscaping and the careful planting of trees so as not to create view obstructions.*
- *The City must continue to enforce the Oil Code landscaping and maintenance standards.*
- *Views from existing dwellings should be preserved when feasible, but efforts to preserve views should not infringe on the rights of property owners to develop in accordance with the existing Hilltop Area Specific Plan.*
- *The City should encourage the development of a comprehensive system of sidewalks and trails to encourage walking and hiking and the enjoyment of the view from the hilltop.*
- *The City should consider revision or deletion of the PD-2 zoning district because the text and standards are difficult to apply to development proposals*

## **Land Use Element**

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### **6. Southeast Neighborhood**

The Southeast Neighborhood has enjoyed a significant resurgence during the past planning period (1989 - 2000). The redevelopment of formerly commercial properties along Pacific Coast Highway with new single family homes (Signal Hill Village and East Village) reinvigorated the neighborhood by removing the blighting influences of obsolete commercial highway uses. However, much work remains to be done to turn around the appearance and character of Pacific Coast Highway. The Southeast Neighborhood is an older attractive neighborhood of tree-lined streets and a variety of housing styles. Both property maintenance and values increase with elevation where the view improves and with distance from Pacific Coast Highway, a busy and noisy State highway. The Southeast Neighborhood is located close to the Civic Center, Signal Hill Park and the Library, but lacks a neighborhood park. To address the need, the City recently acquired two lots on Raymond Avenue for development of a park.

Between Cherry and Stanley Avenues the character of the neighborhood is primarily single family and duplex homes. East of Stanley Avenue, the topography changes dramatically affording opportunities for hillside housing including some of the City's more expensive view homes on Terrace Drive and Stanley Avenue. Nearby, are high value multi-family view oriented condominium flats on Molino Avenue and 20<sup>th</sup> Street. The existing Commercial Residential zoning designation that applies to the properties with street frontage on Cherry Avenue is difficult to apply to new development proposals. The City may want to study the Commercial Residential designation and consider an all residential designation for the Cherry Avenue properties between the City boundary at the railroad right-of-way and 20<sup>th</sup> Street.

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The east half of the Southeast Neighborhood, generally located between Orizaba and Redondo Avenues, consists of a light industrial park occupied by light manufacturing, warehouses and office uses. There are few remaining vacant lots in the industrial park, but it is anticipated that older obsolete storage yards and obsolete warehouse buildings will be replaced by newer development as the demand for light industrial space continues to grow. The City has adopted a Pacific Coast Highway Specific Plan to control new development and reuse of existing industrial and commercial buildings in this area but the area is located outside of the boundaries of the Redevelopment Project Area. Reuse or replacement of the vacant Beach City Chevrolet auto dealership buildings remains one of the most difficult issues for the Southeast Neighborhood. The following are comments from Southeast Area residents and businesspersons that attended the Southeast Neighborhood workshop:

***What Southeast residents like:*** *Small town atmosphere, a location that is close to beaches and shopping, proximity to the City Hall and Signal Hill Park.*

***What they don't like:*** *Cut through traffic from Cherry Avenue and Pacific Coast Highway, dilapidated businesses on Pacific Coast Highway and Cherry Avenue, lack of neighborhood parks.*

### ***Recommendations:***

- *The City should encourage homeownership and home improvement*
- *The City should encourage renovation of existing dwellings, when practicable, or the replacement of obsolete housing.*
- *The City should encourage further renewal efforts along Pacific Coast Highway.*
- *The City should study the current Commercial /Residential along Cherry Avenue between Pacific Coast Highway and 21<sup>st</sup> Street. The school should be given a Public Institutional designation and the properties fronting on Cherry Avenue should be re-designate residential consistent with the adjacent residential neighborhood.*
- *The Cities of Signal Hill and Long Beach should coordinate planning efforts to effectuate improvement of dilapidated Pacific Coast Highway properties.*

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### **7. Atlantic/ Spring Neighborhood**

The Atlantic/ Spring Neighborhood contains the single largest vacant land area remaining in the City. This neighborhood is located between Atlantic and California Avenues and the 405-Freeway and Willow Street. It remains vacant because there are overwhelming constraints to development including: ongoing oil production activities primarily independent oil operations; contaminated soils including sumps and past refining facilities; small lot sizes and fragmented ownership patterns; lack of infrastructure; and topographical constraints including steep slopes and a ravine north of Columbia Street. Long ago, a stream ran through the Atlantic/Spring Neighborhood from northeast to southwest. Portions of this streambed were filled with rubble following the Long Beach Earthquake in 1932. Existing land uses include medical offices and related facilities that support the Memorial Medical Center along Atlantic Avenue, and a mix of commercial and residential uses along Willow Street. The City is currently processing an environmental impact report for a 22-acre Home Depot retail center on a site overlooking the 405-Freeway and greater Long Beach at the northeast corner of Spring Street and Atlantic Avenue. The City of Long Beach plans to develop a large (26-acre) pay-for-play Sports Park between Willow and Spring Streets east of California Avenue.

During the past planning period, the Cities of Signal Hill and Long Beach established the Spring Street Corridor Joint Powers Authority to facilitate planning for the Spring/Atlantic Neighborhood. The genesis of the Authority, a proposed stock-car racetrack proved infeasible due to the aforementioned constraints and other environmental concerns. Other development ideas for the area included a golf course and residential neighborhood. The City did not hold a general plan workshop for the Atlantic/Spring Neighborhood but received considerable advice from the landowners during Authority meetings and independent efforts to organize owners in support of a development plan. Property owners suggest that interior properties, sites lacking commercial frontage, should be designated for industrial use and sites with commercial

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frontage designated for commercial uses that support or benefit from the nearby medical center or the proposed Sports Park and Home Depot projects.

### ***Recommendations:***

- *The City should prepare a Specific Plan and rezone the Atlantic/ Spring Neighborhood for General Industrial and Commercial use.*
- *The City should seek grants to study and develop the infrastructure necessary for the development of the Atlantic/ Spring Neighborhood.*
- *The City should seek federal and /or state grants and other tax revenues targeted toward “brownfield” development opportunities.*

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### **IV Constraints and Issues**

The preceding section of this element evaluated population, employment, economic and redevelopment trends and discussed needs, issues and preferences of the residents and businesspersons that participated in the General Plan workshop series. In order to develop land use policies for the future, it is important to first examine existing land use constraints and issues as they relate to other elements of the General Plan. In the case of the Land Use Element, the constraints are both natural and man-made physical constraints that determine site suitability for different types of land uses and compatibility among land uses.

#### **Residential Density**

A consistent theme heard at the community workshops was support for the continuation of the current General Plan Land Use Element policies regarding "moderate growth" residential density. Both the 1986 and 1989 Land Use Element updates considered the need to establish varying residential densities within the City to provide a range of housing types to meet the needs of the community. Another important consideration in determining residential densities for certain areas of the City is the need to provide affordable housing and to conform to State mandates that requires each California city provide its fair share of affordable housing opportunities consistent with local need and employment opportunities. The specifics of the local need are addressed in the Housing Element.

Considerations in determining residential densities for certain areas of the City include the capabilities of public utility infrastructure, the capacity of the circulation system, the availability of public services and existing and man-made conditions. Funding for growth and development of the infrastructure includes developers paying their fair share of improvement costs. The residential policies established in the 1986 General Plan and updated in the 1989 Land Use Element have succeeded in encouraging private sector residential development in the vacant residentially zoned areas of the City. The City has adopted six residential specific plans encompassing approximately 255 acres of land as follows:

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California Crown - Developed in 1990, this neighborhood of ninety single-family homes is one of Signal Hill's most prestigious communities. The site constraints to development were significant, including the abandonment and re-drilling of numerous oil wells, relocation of local streets, soils issues and the need to extend water mains to the hillside area.

Sea Breeze Manor - This very low-income high-density housing development of 52 attached dwellings replaced a troubled and obsolete apartment complex. With assistance from the Agency, the Crippled Children's Society combined the resources of several agencies to provide housing for disabled residents. The development is located adjacent to the Civic Center and Signal Hill Park.

Signal Hill Village - This high-density single family detached dwelling project includes 52 for sale dwellings. It replaced some of the City's most dilapidated commercial development along Pacific Coast Highway and helped to rejuvenate the Southeast Neighborhood by reducing cut-through traffic from Pacific Coast Highway to Cherry Avenue.

Hilltop Promontory - Adopted in 1992 and amended in 1993 and again in 1999/2000 the Promontory is the City's "crown jewel" residential neighborhood. The original specific plan called for 525 dwellings. The current plan tempered by the refinement of geologic investigation calls for approximately 450 single-family homes and duplex townhouses.

Bixby Ridge - Planned as an entry level small lot single-family development this 189 dwelling gated community includes the five acre Discovery Well Park and a system of trails that link the neighborhood to the hilltop Panorama Trail and Hilltop Park. First entitled in 1997, development of this hillside neighborhood required significant grading and slope stabilization efforts.

Town Center West Senior Housing - This 152-unit development is planned for a 4.5 acre view parcel located adjacent to the City's newest mixed-use retail center.

Build-out in accordance with these approved specific plans will assure that the City achieves the residential density objectives identified in the 1989 Land Use Element as well as achieve State mandated affordable housing objectives identified in the Housing Element. Moreover, creative land use plans for mixed-use development like the Town Center West, that combines neighborhood scale commercial development with high density senior housing located close to major public transportation corridors and shopping opportunities, furthers the community desire to provide housing for all age and income segments of the society. The City should continue to use the specific plan process as the preferred planning process for achieving desired results.

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### **Manage Scenic Hillside Areas**

Signal Hill, from which the City derives its name, is the City's most valuable resource. Its scenic vistas and natural beauty help define the attributes of open space and coastal proximity mentioned often as prime reasons for living in the City. The approved plans for the development of the hilltop and hillsides attempts to preserve open spaces and trails for the future enjoyment of the greater community. Already, the Hilltop Park has become a favorite tourist stop for showing-off the scenic beauty of the area.

Concurrent with the development of the remaining privately owned open space, the importance of enhancing the public viewing locations and improving the walking trails increases. Managing hillside scenic areas also means paying close attention to the architecture of new development and the landscaping on both public and privately maintained hillsides. View obstructing trees should be discouraged through the site plan design review process and enforcement of homeowners associations' rules and regulations.

### **Quality Development**

A major theme of the 1986 Land Use Element restated here and made part of this update is the concern that during the 1970's-1980's, the City allowed too much low quality, poorly designed development to occur without benefit of design review guidelines and specific plan standards. The Land Use Element recognizes the continuing need to maintain a high level of control over the development review process in order to achieve the highest quality development. An important element of quality development is the City's commitment to an urban design concept and the wherewithal to stick to an urban design theme long enough to impact the community and give it a unique sense of place. Through the Site Plan and Design Review process the City has identified and repeated certain design elements that help give it a unique sense of place including the following:

- Pyramid roof elements on commercial buildings.
- Smooth finish stucco exterior on commercial buildings.
- Square archways instead of curved archways on commercial buildings.
- Multi-tone paint exteriors with dark color base banding on commercial buildings.
- Opposing image buildings (Office Depot at Willow & Redondo and industrial buildings at Gundry Avenue north of Willow Street).
- Denni mansion theme walls (Hilltop parks & trails and Promontory residential) Cherry Avenue wall, stucco pilasters and over-size wrought iron (along Cherry Avenue. Also found at the gate at the end of Junipero Avenue).
- High quality landscaping and oilfield landscaping.
- Distinctive "Hill Swoosh" logo City entry signs.
- City Hall & Community Center oil patch.
- City history photo collection.
- City Hall deco architecture (Community Center and Signal Hill Storage on PCH).

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- Meandering sidewalks (Town Center and Bixby Ridge). In addition to quality design, quality development requires that the City remains committed to its plan review and inspection during construction to assure long lasting beauty and durability of the built environment.

Quality development also includes development of high quality public works infrastructures including power, communications, sewer, water, storm drains, street improvements, trees, lighting, and landscaping. Moreover, providing quality development entails the provision of high quality community services including the following: parks, trails, libraries, community and police services. New development must contribute its fair share to the design, development and maintenance of these facilities and services.

The City has attempted to improve the appearance of new development projects by requiring that overhead utilities be placed underground when technically feasible. Unfortunately, it is too expensive to bury high voltage lines (16 Kilowatts and above) that crisscross the City, and utility funding (Rule 20A) for undergrounding existing utility systems is increasingly limited.

### **Revitalize Older Commercial and Industrial Areas**

During the past planning period, the Land Use Element established goals for the improvement of the appearance of the oil field and recommended a move away from heavy industrial uses, especially refining activities. Perhaps the most striking visual change in the City in recent years is the dramatic change of the oil field as a result of the adoption of the Signal Hill Oil Code in 1986. The City mandated that the oil operators paint all pumping units and tanks and plant five trees and seven shrubs for each pumping unit and tank. Drought tolerant trees and plants were selected for landscaping the oilfield because many oil field areas lacked water for irrigation. As the landscaping has matured, it has transformed the appearance of the oilfield and the City into a garden like environment.

Further revitalization of the heavy industrial areas occurred as a result of market conditions unfavorable to refining activities and City code enforcement efforts. During the past planning period, the last of the petroleum refineries were dismantled including Eco refinery, Enviropur (formerly PRC), and Chemoil (formerly McMillian) refinery. In addition, the Redevelopment Agency's development of the Signal Hill Auto Center contributed to the replacement of two large auto junkyards, numerous oil field equipment storage businesses, and two large petroleum tank farms.

Notwithstanding these changes, the unique character of Signal Hill remains entwined with ongoing oil field activity, diversity of land uses and the variety of architectural styles found in the City. The desire to preserve the character of Signal Hill must be weighed against the desire to transform the City into a more attractive community. In 1999, the City addressed the unattractive storage yard issue in one area of the City. The Orange Avenue Improvement Program and implementation ordinance required that property

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owners of existing storage yards located along Orange Avenue construct screen fences and plant landscaping. It also included incentives designed to encourage the Orange Avenue property owners to improve their properties, including City funded street improvements and a relaxation of building setback and right-of-way dedication requirements. Expansion of the Orange Avenue Improvement Program is recommended to include the remaining storage yards throughout the City.

Large truck traffic and the port related need for shipping container and truck storage facilities is a growing concern for planners in the greater Signal Hill area. The Land Use Element recommends against the establishment or expansion of large truck facilities and truck transportation related storage facilities.

### **Revitalize Older Residential Areas**

The community takes pride in its limited examples of historic dwellings and places. Residents and visitors alike admire the City Hall and its collection of historic photographs. The City has encouraged individual efforts to preserve historic structures, collected photographs and preserved oral histories from seniors who were once active in the oil field and civic affairs. The Land Use Element recognizes the growing interest in the community to identify and promote the restoration and preservation of historic dwellings and the documentation of Signal Hill's colorful past through oral histories and photographs.

Special attention should be placed on older residential neighborhoods that need maintenance and upgrading to continue to provide safe and attractive living accommodations for the residents. The Land Use Element encourages renovation of existing dwellings when feasible and the replacement of obsolete structures when necessary.

### **Diversify the City's Economic Base**

The City relies heavily on retail sales taxes to provide public services. While retail sales from the Signal Hill Auto Center and Town Center big box retail stores have consistently increased, these sources of retail sales tax revenues are subject to economic cycles. It is increasingly difficult for cities to respond to growth pressures, state and federal mandates and the demands of community interests. The Land Use Element encourages the continued growth of the Town Center and Auto Center, and looks to other areas and sales tax opportunities like business-to-business sales to further growth and diversification of the retail sales tax base. Historically, the City has not relied on the oil industry as a revenue source. Currently, the City receives less than ten percent of its revenue from oil barrel taxes, oil business license taxes and well and tank permit fees. Moreover, the City must maintain a staff to enforce the Signal Hill Oil Code and respond to citizens' issues and concerns about ongoing oil field activities including

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noise, odors, and community disruption. The Land Use Element recommends continued proactive enforcement of the Signal Hill Oil Code in order to minimize the negative effects of the interactions of oil field activities and other urban uses.

### **Address Incompatible Land Uses**

Incompatible land uses exist in several Signal Hill neighborhoods. Such uses, known as nonconforming uses, may have negative impacts on the neighborhood especially residential neighborhoods and sensitive land uses like schools and medical facilities. The City decided against the amortization of nonconforming uses in 1988 and amended the Nonconforming Uses Ordinance to allow the continuation of certain nonconforming land uses including industrial uses in residential districts. Over time, new development has replaced many nonconforming uses, but the successive re-use of nonconforming buildings, some of which are in excellent repair and continue as profitable rental properties, remains a difficult problem for the City.

### **Maintain Adequate Public Facilities and Services**

During the past planning period, the City has greatly improved its public works facilities and system of parks and trails discussed in more detail in the corresponding General Plan elements. It has greatly expanded community services including day care, recreation and library services to the community. The City's policy requires that residential, commercial and industrial developers pay a fair share for capital improvements that benefit their projects and the community. However, the ongoing maintenance of these facilities and the costs of providing community services remain a major fiscal challenge for the City. When possible the City encourages that new developments establish homeowner's association to maintain landscaping, private streets and other neighborhood amenities. Security is also an issue for both residential and commercial neighborhoods where gated neighborhoods and private security services can help relieve public policing costs.

### **Flooding**

The former Pacific Electric Railroad right-of-way along the southerly boundary of the City may be subject to inundation during a major flood event according to official federal flood hazard maps. Localized flooding may occur in low-lying areas where there are no existing flood control facilities. Such facilities are installed concurrent with new development or as part of the City's capital improvement program.

### **Storm Water Pollution**

The City's storm water drains into the Pacific Ocean. Accordingly, all grading and development activity must include storm water pollution protection as a primary

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consideration in order to protect ocean water quality. The type, location and intensity of new development must be controlled by effective storm water management and protection measures. The City may benefit from two major retention basins located in vicinity of Signal Hill, Hamilton Bowl located at Walnut and 20<sup>th</sup> Street and the California Bowl located near the intersection of Orange Avenue and Spring Street. These facilities are viewed as major resources in devising solutions to storm water run-off issues including contamination and water borne trash.

### **Schools**

One major issue for the City is whether to form a school district separate from the Long Beach Unified School District. The City will soon decide this issue because the District has been unresponsive to the City's concerns about education, the concentration of elementary schools in Signal Hill, and the conversion of neighborhood schools into schools serving larger regions of the District. The future use of the Academy property on the southwest corner of Cherry Avenue and 20<sup>th</sup> Street is of interest to the City because full development of the property may impact the Civic Center Neighborhood. Likewise the City has interest in the District's plan for its ten-acre property at the southeast corner of Obispo Avenue and Hill Street.

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### **V Growth Concept**

The year 2010 growth concept builds upon the "moderate" growth alternative adopted in the 1986 Comprehensive General Plan and 1989 Land Use and Housing Element Updates. The moderate growth alternative provides the basis for updating the General Plan and developing goals and policies. Table 6 displays the 1989 moderate growth alternative, actual growth during the past planning period, and predicted growth for four land use categories; residential (population), commercial (retail), industrial and quasi-public (parks). The purpose of reviewing growth alternatives is to establish a framework for decision making related to allocation of land use designations on the land use map in order to provide a desirable distribution and adequate opportunities to accommodate the moderate growth alternative.

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**Table 6 - Growth Concept**

	<b>1986 - Buildout</b> 1986/89 General Plan Land Use Element*	<b>1986 - 2000</b>	<b>2001 - 2025</b> 2001 General Plan Land Use Element	<b>2025 - Buildout</b>
<b>Residential</b>				
Forecast dwelling units:	1,304		867	100
Actual dwelling units:		216		
City total dwelling units:	3,586 (1985)	3,802 (2000)	4,669	4,769
<b>Population</b>				
Forecast total persons:	10,070		10,062	11,286
Actual total persons:		9,247		
<b>Industrial/Commercial</b>				
Forecast sq. ft added /year	176,417		100,880	50,000
Actual sq. ft. /year added		104,624**		
City total building sq. ft:	941,649****	1,464,769	3,986,769***	

**Source: Community Development Department 2001**

\*Moderate Growth Alternative "B" adopted as the preferred growth plan 1986 & 1989

\*\* Actual 106 buildings commercial and industrial 1,464,769 sq. ft. total

\*\*\*Capacity analysis assumes 45% lot coverage of vacant land analysis of air photos 2000.

\*\*\*\*Estimated commercial and Industrial in 1985

**Table 7 Residential Sites & Parks**

Neighborhood	Residential Capacity of Vacant Sites Currently Zoned for Residential Development	Park Acres	
North End	16	Reservoir	2.78
West Side	16	Westside *	0.75
Civic Center		Reingardt ... .... .	0.50
Crescent Heights	35	Signal Hill.....	10.07
Rose/Creston	40		
TCW Senior	152	-	
Hilltop	464	Hilltop	3.18
		Sunset View	0.50
		Discovery Well	4.58
		Panorama Trail	2.34
		Developer Trails	1.71
Southeast	120	Hillbrook Park	0.54
		Southeast Park	0.41
Spring/ Atlantic	-0-		-0-
Totals:	867 dwelling units		27.36 acres

## **Land Use Element**

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### **VI Land Use Map**

The Land Use Map (Figure 3) displays the general pattern and boundaries of land use designations, but does not specify the timing or phasing of future development which is a function of the marketplace. A meandering line is intentionally used to show boundaries between land use designations. The Land Use Map is a general guide to the amount of land and the boundaries of land use types, but should not be substituted for the Zoning Map. Table 8 displays the general land use distribution, acres in each land use category including streets and highways, and the percentage of the total city in each category.

**Table 8 - Land Use Distribution**

Land Use & Density	Area	Zoning	Specific Plans/ Use
1.1 Low Density Residential (< 10 du/ac)	350 acres 24% of city	RL RLM-1 PD-2	SP- 2 Hilltop Area SP- 5 California Crown SP- 9 Bixby Ridge SP-11 Crescent Heights*
1.2 Med. Density Residential (10 - 20 du/ac)	68 acres 5% of city	RLM-2 CR	SP- 8 Signal Hill Village Retail & Residential
1.3 High Density Residential (21 - 35 du/ac)	84 acres 6% of city	RH	SP-2 Area B-1 of Hilltop SP-7 Special Purpose House
3.1 Town Center	87 acres 6% of city	CTC	SP-1 Town Center SP-3 Town Center West SP-6 Commercial Corridor SP-12 Cent. Business Dist.
3.2 Commercial General	179 acres 13% of city	CG	SP- 4 Auto Center SP- 6 Home Depot SP-10 Pacific Coast Hwy.
3.3 Commercial Office	25 acres 2% of city	CO	
3.4 Commercial Industrial	151 acres 11% of city	CITY	Light Industrial & Retail
4.1 Light Industrial	195 acres 14% of city	LI	Light Industrial
4.2 General Industrial	192 acres 14% of city	GI	General Industrial
PI Public Institutional	35 acres 3% of city	PI	School, Civic Center, City Yard, Public Buildings/Utilities
OS Open Space	24 acres 2% of city	OS	Parks & Trails

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Totals: 1,390 acres/2.17 sq. miles

Summary: Residential 35%, Commercial 21%, Industrial 39%, Park/Public Institutional 5%

## **Land Use Element**

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**Figure 3 - Land Use Map**

## **Land Use Element**

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The following text describes the purpose of the land use designations, the intended character for new development and the density or intensity of development. There are three residential, six commercial and industrial, and two miscellaneous land use designations; open space and public institutional. A maximum dwelling unit density is specified for each of the three residential designations (Low, Medium and High Density). A mix of residential densities may be permitted in any area consistent with its residential land use description, but the maximum residential density shall not be exceeded within an area or in an individual development project. However, the maximum residential density may be exceeded in an affordable housing development that provides housing for low or very-low income households. When necessary to implement land use element goals and objectives, lower densities may be required. Examples of when circumstances may warrant lower densities include severe topography, earthquake fault zones and other hazardous conditions.

### **1.1 - Low Density Residential (less than ten dwelling units per acre)**

The Low-Density Residential category allows single-family detached dwellings on individual lots, and in the Hilltop Area attached dwellings containing two to four units. Developed areas of the City that are designated as Low-Density Residential include California Crown located at Temple Avenue and 20<sup>th</sup> Street and portions of the Southeast Neighborhood located south of 21<sup>st</sup> Street. Vacant Low-Density Residential areas include the following:

- Bixby Ridge - remaining vacant land located along Hathaway Drive north and south of Hill Street.
- Ten-acre parcel - located north of 21<sup>st</sup> Street and west of Obispo Avenue.
- Crescent Heights - located between Walnut and Rose Avenues and Creston and 25<sup>th</sup> Streets. It is recommended that the Crescent Heights area is designated a Historic District the boundaries of which are shown on Figure 4.
- Hilltop Area - remaining vacant areas with the exception of Area I-B located at Ohio Avenue and Skyline Drive that is designated for high-density development.
- Four acre parcel - located at the southwest corner of 21<sup>st</sup> Street and Temple Avenue.
- Ten acre oil field parcel - located northwest of Obispo Avenue and 20<sup>th</sup> Street.
- North Slope of Signal Hill - the current zoning allows for the development of 120 dwellings (4 per unit buildings) on approximately 35 acres of hillside land. The Sierra Club, the City and the property owner are discussing an alternative plan to establish an open space conservancy on the North Slope.

Development standards for the Low-Density Residential land use category are defined by specific plans or by zoning districts including:(SP-2)-Hilltop Area Specific Plan, (SP-5)-California Crown, and (SP-9)-Bixby Ridge, (RL)- Residential Low Density, RLM-2) - Residential Low Medium Density, and (PD-2)- Planned Development Area-2. The PD-2 zoning standards assign density according to the quality of project design. Interpretation of the PD-2 standards is confusing and it is proposed that the designation be revised to another residential zoning district designation.

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### **1.2 - Medium Density Residential (10 - 20 dwelling units per acre)**

The Medium-Residential Density land use category includes most land in the North End and West Side Neighborhoods that are largely developed with a mix of lower density single family detached dwellings and medium density multi-family development. Vacant Medium-Residential Density land is found scattered among existing developed parcels. New development may include single-family detached or attached duplex development on lots zoned RLM-2 Residential Low Medium-2.

### **1.3 - High Density Residential (20 - 35 dwellings per acre)**

The High-Density Residential land use category provides opportunities for multi-family development including multi-story condominiums and apartments. The High-Density Residential areas are located in the Civic Center, West Side and Hilltop Neighborhoods where there are existing high-density residential developments. Vacant land within this category are located in the Hilltop Area 1-B and the senior housing site in the Town Center West located at the northeast corner of Walnut Avenue and 25<sup>th</sup> Street. High-density affordable housing in any configuration may be permitted subject to the Special Purpose Housing Specific Plan.

The Commercial Land Use Categories remain unchanged from the 1989-land use plan except that the Mixed Use category is deleted along Cherry Avenue between the City boundary south of 19<sup>th</sup> Street and 21<sup>st</sup> Street. The Mixed Use designation is inappropriate for the Alvarado School on the west side of Cherry Avenue designated in this plan as Public Institutional. The remaining parcels along the east side of Cherry Avenue are designated 1.1 Low-Density Residential consistent with the adjacent Southeast Neighborhood.

#### **3.1 - Town Center**

The Town Center land use category is the commercial core of the City generally located at the intersection of Cherry Avenue and Willow Street. The Town Center category provides opportunity for large-scale retail stores, offices, entertainment and dining as well as neighborhood shopping centers. Vacant parcels include Town Center North located at the northeast corner of Walnut Avenue and Willow Street and a two acre site on the northwest corner, and the proposed Central Business District bounded by Cherry and Gardena/Rose Avenues and Creston and 25<sup>th</sup> Streets. New development in the Town Center is guided by existing Town Center East and the Commercial Corridor Specific Plans and by the Willow/Spring/Cherry Landscape Overlay District. These plans and design guidelines promote orderly development, compatible land uses and cohesive design primarily through the design review procedure including architecture, landscape and sign plan review. It is recommended that the City prepare a Heritage Square/ Central Business District specific plan for the Town Center area between 25<sup>th</sup> and Creston Streets and Cherry Avenue west to midway between Rose and Gaviota Avenue. Figure 4 displays the proposed boundaries of the proposed specific plan(s) for the Heritage Square/ Central Business District and also the Crescent Heights Historic District.

## **Land Use Element**

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The Heritage Square/ Central Business District (CBD) is envisioned as a high intensity mixed-use development that may include the following land uses; retail shops, entertainment, fitness center, eateries including fine dining and outdoor dining and professional or business offices. High density residential condominium flats or lofts may be part of comprehensively designed CBD project that provides as part of the residential development project public amenities such as a town square, park or public viewing area. In lieu of development of a museum facility it is recommended that public and private spaces incorporate art, photographs and artifacts that portray Signal Hill's oil field history. The CBD should serve the community as a venue for socializing, shopping, dining, and recreating in a high quality view-oriented urban environment.

### **3.2 - Commercial General**

The Commercial General land use category is characterized by a variety of miscellaneous retail and commercial service land uses including retail sales, automotive repair, restaurants, offices, day care, nursery, technical schools and convenience stores. The Commercial General areas are located along major arterial highways including Wardlow Road (where the City of Long Beach controls the frontage, zoning and business licensing), Willow Street between Atlantic and California Avenues, Spring Street between Atlantic and California Avenues, and the Target shopping center located in the North End neighborhood at 33<sup>rd</sup> Street and California Avenue. Vacant land and potential development opportunities include the northeast corner of Spring Street and Atlantic Avenue where Home Depot is proposing to develop a new shopping center, the Auto Center, and the Target shopping center.

### **3.3 - Commercial Office**

The Commercial Office land use category provides for the development of professional offices and related supportive retail and service commercial uses. Offices permitted by this category include finance, insurance, architecture, engineering, real estate, business support services and medical or dental. Support commercial services may include hotels, medical laboratories, research facilities, clinics, restaurants and delis, retail drug stores and copy centers. Vacant Commercial Office land is located along Atlantic Avenue north of Willow Street and on Walnut Avenue north of 21<sup>st</sup> Street. New development in the Atlantic Avenue Commercial Office area should compliment existing large scale medical offices including but not limited to professional or medical office in mid to high-rise structures, hotels, medical laboratories and research facilities, clinics and medical supply facilities and related retail and service uses. The Commercial Office area located on Walnut Avenue south of Hill Street may provide opportunity for the enlargement of the adjacent existing office complex.

### **3.4 - Commercial Industrial**

The Commercial Industrial category is intended to accommodate a combination of retail and light industrial uses. The designation applies to areas located along Willow Street and Cherry Avenue. The Commercial Industrial designation allows for mixed-use types of businesses such as manufacturing with retail sales of the manufactured product or

## **Land Use Element**

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warehousing with limited retail sales. Because the typical buildings in the Commercial Industrial category are designed and parked for light industrial use the appropriate uses should not overburden limited parking in the area, but should compliment the retail business along Willow Street and Cherry Avenue. Likewise, heavy industrial uses are not encouraged in the Commercial Industrial category.

### **4.1 - Light Industrial**

The Light Industrial land use category is designed to accommodate a variety of light industrial uses which are nonpolluting and which can coexist with surrounding commercial and residential uses. Permitted uses shall include, but are not limited to, research and development, assembly, general offices, light manufacturing not involving excessive noise, vibrations, odors, dust or hazardous materials. Uses permitted in the Light Industrial category include limited warehouse and distribution uses of finished products but not transportation, storage or shipping uses involving fleets of large size (tractor trailer) trucks. Support commercial services like delicatessens and other eateries are allowed provided there is adequate parking. The light industrial category is not intended for cargo container storage, fleet storage of buses, tractor-trailer size trucks, large scale recycling, tow-truck impound yards and auto body repair or painting businesses.

Development in the Light Industrial areas should compliment the existing modern industrial park development with landscaped setbacks orderly parking lots, and high quality design buildings. When light industrial development abuts commercial or residential development special buffering or wall treatments should be incorporated into the design to minimize incompatibilities.

### **4.2 - General Industrial**

The General Industrial land use category provides opportunities for heavy industrial uses that can coexist with adjacent light industrial and commercial development. A variety of manufacturing, machine shop, auto repair (excluding auto body and paint), warehousing and distribution, assembly, outdoor storage uses, lumber yard, roofing yard, etc. The general industrial category may include heavy industrial uses subject to conditional use permit approval such as, but not limited to large recycling centers, hazardous waste management facilities, concrete ready mix plants, outdoor storage yards, oil field service equipment storage yards, lumber yards, contractors' storage yards and manufacturing and assembly. Conditionally permitted uses shall be required to demonstrate that they can operate safely and compatibly with surrounding existing and planned land uses and that they can mitigate environmental impacts including, but not limited to; noise, vibration, smoke, odor, dust, glare, radiation or other environmental impacts. Certain heavy industrial uses are not be permitted including petroleum refining, bulk storage of petroleum products, waste water treatment, bulk storage or processing, cargo container storage yard, tractor-trailer size truck storage yard, transportation vehicle storage yard or repair facility, auto body shop with or without painting, forge or foundry, raw materials processing, and meat, fish or poultry

## **Land Use Element**

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processing. The evaluation of conditionally permitted land uses in the General Industrial area shall consider how well the proposal addresses the aesthetic impacts on the surrounding community by incorporating landscaping, high quality architecture and setbacks into the site design.

### **OS - Open Space**

The Open Space category includes public parks, trails and privately owned trails/enhanced walkways when the general public has access to the use of the trail/enhanced walkway recorded as a pedestrian easement. The 1986 General Plan combined a discussion of Open Space and Conservation into one Environmental Resources element. In 1989, the City adopted a Parks and Recreation Master Plan and incorporated that document into the General Plan by reference. The Parks and Recreation Master Plan was revisited in 1998 and its goals and objectives reaffirmed as still relevant. A 2000 Community Needs Assessment also supported the Master Plan concepts and also recommended establishing the PI - Public Institutional land use designation for schools and non-recreation public facilities.

### **PI - Public Institutional**

The Public Institutional land use category is for public school sites; institutions, utility facilities and public buildings formerly included in the open space land use category. The intent of the Public Institutional category is to improve the open space calculation that was overstated in previous general plans. There are four existing school sites within the City far more than necessary to serve the neighborhood populations in vicinity of the schools. New Public Institutional development should reflect the public interest in high quality durable architecture and landscaping to compliment existing surrounding development.

## Land Use Element

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**Figure 4 Historic/ CBD**

## **Land Use Element**

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### **VII Special Management Areas Map**

Natural and man-made environmental features will impact the ultimate use of the remaining vacant land in the City of Signal Hill. Development without special precautions in these areas could result in the loss of life and property. For this reason, the Special Management Areas Map (Figure 5) identifies the location and general extent of special features and this section provides general guidelines for consideration prior to development of these areas.

#### **Geologic Study Area**

The California State Geologist collects data concerning the location and sensitivity of the state's earthquake faults, and publishes seismic safety maps pursuant to the Alquist- Priolo Geologic Hazards Act. Within the special studies zone identified by the State Geologist certain precautions must precede development: Structures for human occupancy must not be constructed across an actual surface expression of an active fault. A site-specific geologic study must be prepared during the plan review period to determine the precise location of active faults. Proposed buildings must be set back a minimum of 50 feet from an active fault. The set back increases when fill conditions are proposed. All structures must be designed in accordance with the most current adopted Uniform Building Codes and all grading plans must be designed in accordance with the Uniform Grading Codes.

#### **Noise Impact Areas**

Certain areas along major arterial highways or under the flight path of aircraft are considered noise impact areas. These areas are defined in more detail in the Noise Element of this General Plan. New development within a noise impact area must conform to certain standards including the following: Residential structures must be designed to conform to Title 25 of the State of California Housing and Community Development Law. An acoustical study must be prepared for all residential structures proposed within a noise impact area as defined by Title 25 of the State Government Code. Structures must be designed to mitigate noise to acceptable standards per Title 25.

#### **Petroleum Production Areas**

Most vacant land in the City is vacant because it is part of the extensive "secondary recovery" oil field project that requires multiple well locations for petroleum and gas extraction and water injection. Pipelines transport gas and a mixture of petroleum and water from the production wells to centralized processing facilities where the water is separated and recycled back into the oilfield at injection well sites. Further refining of the petroleum occurs outside of the City because there are no refineries remaining in town. Petroleum production is anticipated to continue during the planning period. There are approximately 485 wells scattered throughout the City, therefore there is

## **Land Use Element**

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Figure 5 - Special Management Areas Map

## **Land Use Element**

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increasingly potential for conflict between oil production activities and other urban uses. Periodic well servicing activities may continue for several days and disrupt the peace and quiet of the surrounding neighborhood. Moreover, petroleum spills and splattering has the potential to damage property and furtive gas leaks, though rarely combustible, are odorous and affect local air quality. In sensitive hillside locations the oil field pumping units may also have view impacts. Accordingly, development in oil production areas must consider the following: Irrespective of property lines, new structures must conform to the setback requirements of the Uniform Fire Code. The design of all projects must consider the preservation of access to wells and easements for pipelines and oil field utilities. All wells including active, inactive or abandoned wells must be considered during the plan review process and wells must be abandoned, re-abandoned or improved to conform to the State of California, Department of Conservation standards. When feasible, oil production facilities may be integrated into new development projects. Pumping units shall be painted and landscaped to soften visual impacts. Operating agreements (Joint Use Agreements) that allow for the continuation of oil production activities in both residential neighborhoods and parking lots of retail centers and provide for the continuation of petroleum recovery activities while putting valuable land into compatible productive urban uses are recommended for all new development in the oil field.

### **Scenic Vistas**

The view from the hilltop is a valued public resource that must be preserved for the benefit of the community and the general public. The Hilltop Area Specific Plan recognizes the importance of preserving the public view and prohibits the construction of new dwellings that may interrupt the current unobstructed views from the Hilltop, Sunset View or Discovery Well Parks. Homeowners are also interested in preserving the view from their private dwellings and the purchase price of hillside housing often includes a "view premium". The City has adopted a View Policy and in the Hilltop Area Specific Plan, a View Ordinance, that attempts to balance existing residents' views and the property owners' right to develop vacant property in accordance with the Hilltop Area Specific Plan or other zoning standards. Through careful planning and analysis of the specific site and the affected views, new structures in hillside areas shall be designed and located where they have the least impact on existing views from private dwellings.

## **Land Use Element**

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### **VIII Goals and Policies**

Signal Hill residents, businesspersons and community leaders success in preserving the community's character and the features that make Signal Hill such a desirable place to live and do business has required a thoughtful approach to the land use decision making process. The community has worked diligently to create a clear sense of priorities and direction expressed here as Signal Hill's land use goals and policies.

**GOAL 1 - Manage growth to achieve a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space, and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City revenues.** Goal 1 expresses the community desire to continue with a managed growth scenario to provide development opportunities for a variety of urban uses so long as the combination of land uses includes new or expanded revenue streams that support the public infrastructure and services needed for a growing community.

**GOAL 2 - Ensure that new development is consistent with the City's circulation system, availability of public facilities, existing development constraints, and the City's unique characteristics and natural resources.** Goal 2 expresses the importance of the interrelationship between all of the General Plan elements and recognizes limitations on growth may be necessary due to the capacity of the circulation system and other public facilities or development constraints including natural conditions like the earthquake fault zone or steep slopes.

**GOAL 3 - Assure a safe, healthy, and aesthetically pleasing community for residents and businesses.** Goal 3 recognizes that the community values public safety through design and support of police services, the importance of a healthy environment through building and safety codes, health and fire and pollution regulation, and an aesthetically pleasing environment through site plan and design review and landscaping standards and the maintenance of private and public lands and facilities.

**GOAL 4 - Ensure that future land use decisions are the result of sound and comprehensive planning.** Goal 4 states the community's intent to be actively involved in the planning process including regional planning issues. Public participation in the development review process is encouraged and facilitated through community workshops and public hearings. Public officials participate in regional planning through the Gateway Council of Governments and the Southern California Association of Governments and professional organizations that promote regional solutions to local issues.

The four land use goals are restated below and given greater clarity through policy statements designed to further explain the goal and facilitate and support future decisions that will be made during the development review process. The policies are used to support staff recommendations for or against future development related decisions.

## **Land Use Element**

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**GOAL 1-Manage growth to achieve a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space, and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City revenues.**

Policy 1.1 - Encourage and manage growth in order to accommodate year 2010 moderate growth population, household and employment projections.

Policy 1.2. - Provide opportunities for a variety of residential densities and housing styles.

Policy 1.3 - Support the maintenance of residential areas and encourage in-fill of vacant lots close to transportation, municipal facilities, and shopping opportunities.

Policy 1.4 - Provide for density bonuses, which exceed maximum densities specified in the land use plan and classification system, for development projects for low and very-low income or "special need" households in low, medium, and high-density land use classifications.

Policy 1.5 - The distribution and intensity of land uses shall be consistent with the land use map and descriptions for each of the land use categories in Section VI of the Land Use Element.

Policy 1.6 - Ensure an adequate supply of commercial and industrial land for potential commercial and industrial expansion and development.

Policy 1.7 - Broaden the City's tax base by attracting commercial and industrial development to the City which will provide economic and employment benefits to the community while ensuring compatibility with other general plan goals and policies.

Policy 1.8 - Focus major commercial activity into economically viable and attractive centers. Concentrate retail, office, and complimentary uses in or near the City's Town Center. Support the Spring Street corridor as secondary commercial location.

Policy 1.9 - Provide incentives to encourage lot consolidations and large parcel land assemblage to provide expanded opportunities for coordinated development and redevelopment.

Policy 1.10 - Discourage the expansion of industries, which by their nature produce noise, odors, dust, traffic, and air pollution, which pose a risk to human health or the environment.

Policy 1.11 - Encourage a wide range of responsive and accessible public facilities and community services, including fire and police protection, library and educational, cultural and recreational opportunities, and other municipal services.

## **Land Use Element**

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Policy 1.12 - Increase the amount and improve the network of public and private open space areas for active or passive recreation.

Policy 1.13 - Encourage landowners to contribute land and facilities to the City, which add to its beauty, convenience, amenities and cultural enrichment.

## **Land Use Element**

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**GOAL 2 - Ensure that new development is consistent with the City's circulation system, availability of public facilities, existing development constraints, and the City's unique characteristics and natural resources**

Policy 2.1 - Coordinate and monitor the intensity and impact of land uses in Signal Hill and Long Beach on the City's existing transportation and circulation systems so that they are able to provide for the efficient movement of people and goods with the least interference.

Policy 2.2 - Preserve the integrity of hillside areas through low-density development, regulating the maximum intensity of development through a specific plan review process.

Policy 2.3 - Protect scenic vistas from public areas with special attention given to vistas adjacent to Panorama Drive, south of Skyline Drive and west of Stanley Avenue.

Policy 2.4 - Regulate development in identifiable hazardous areas as shown on the Special Management Areas Map or in areas that are environmentally sensitive.

Policy 2.5 - Ensure an orderly extension of essential services and facilities and preservation of a free-flowing circulation system, by requiring the provision of essential services and facilities at the developer's cost where these systems do not exist or are not already part of the City's financed annual Capital Improvement Program.

Policy 2.6 - Encourage the development of oil field areas through the removal or relocation of wells and pipelines, or with site plan designs that encourage the joint use of land for oil production and other urban uses while maintaining essential access to petroleum resources.

## **Land Use Element**

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**GOAL 3 - Assure a safe, healthy, and aesthetically pleasing community for residents and businesses.**

Policy 3.1 - Mitigate traffic congestion and unacceptable levels of noise, odors, dust, and glare which affect residential areas and sensitive receptors.

Policy 3.2 - Enhance the interface between existing and future development and oil production activities to protect the access to the resource while mitigating adverse impacts of oil field operations within an urban area.

Policy 3.3 - Ensure a sensitive transition between commercial or industrial uses and residential uses by means of such techniques as buffering, landscaping, and setbacks.

Policy 3.4 - Promote mixed-use development and ensure compatible integration of adjacent uses to minimize conflicts.

Policy 3.5 - Encourage the elimination of nonconforming uses and buildings and limit the reuse of nonconforming buildings to less intensive uses more compatible with the underlying zoning.

Policy 3.6 - Provide for undesirable or hazardous commercial or industrial uses while avoiding concentrating those uses in close proximity to schools or residential neighborhoods, and ensure adequate monitoring of those uses, which involve hazardous materials to avoid industrial accidents, chemical spills, fire, and explosions.

Policy 3.7 - Maintain and enhance the quality of residential neighborhoods.

Policy 3.8-.Promote the rehabilitation, revitalization, or replacement of deteriorating residential properties, if necessary, without threatening the security and comfort of residents.

Policy 3.9 - Safeguard residential neighborhoods from intrusion by nonconforming and disruptive uses.

Policy 3.10 - Encourage the revitalization and redevelopment of older commercial and industrial areas.

Policy 3.11 - Maintain and improve, where necessary, the City's infrastructure and facilities.

Policy 3.12 - Encourage and promote high quality design and physical appearance in all development projects.

## **Land Use Element**

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Policy 3.13 - Reinforce Signal Hill's image and community identity within the greater Long Beach Metropolitan area.

Policy 3.14 - Preserve and enhance the City's special residential character by encouraging the preservation, renovation and relocation of historic structures in low intensity residential development and a harmonious blending of buildings and landscape.

Policy 3.15 - Improve the image of major highways by use of landscaping, lighting, graphics, and/or other streetscape treatments.

Policy 3.16 - Review and revise, as necessary, the City's development standards to improve the quality of new development and protect the public health and safety.

Policy 3.17 - Promote "smart growth" principles that encourage development that is economically viable, creates a sense of community, and preserves natural resources. Smart growth includes narrower streets, mixed uses, smaller setbacks, open spaces, habitat preserves and parks, infill development and compact commercial centers, and the reuse of brownfields.

Policy 3.18 - Minimize the impacts of storm water runoff to the maximum extent practicable, on the biology, water quality and integrity of natural drainage systems and water bodies

Policy 3.19 - Maximize to the extent practicable, the percentage of permeable surfaces to allow more percolation of storm water runoff into the ground

Policy 3.20 - Minimize to the extent practicable, the amount of storm water directed to impermeable areas and to the municipal separate storm water system. Build storm water pollution prevention systems into all development projects including maximizing landscaped areas and providing areas for storm water storage and sedimentation.

Policy 3.21 - Require new projects to include permanent controls to reduce storm water pollutant loads from development sites including parking lots to the maximum extent practicable.

## **Land Use Element**

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**GOAL 4 - Ensure that future land use decisions are the result of sound and comprehensive planning.**

Policy 4.1 - Consider all general plan goals and policies, including those in other general plan elements, in evaluating proposed development projects for general plan consistency.

Policy 4.2 - Maintain consistency between the Land Use Element, the other elements of the general plan, the zoning ordinance, and the Municipal Codes regulations and standards.

Policy 4.3 - Endeavor to promote public interest in the understanding of the general plan and land use programs.

Policy 4.4 - Encourage citizen participation in planning and the land use decision making process and development of land use programs and policies.

Policy 4.5 - Foster inter-governmental cooperation and coordination in order to maximize the effectiveness of land use policies.

Policy 4.6 - Develop comprehensive local and regional rather than piecemeal planning solutions and promote long-range solutions to land use issues.

Policy 4.7 - Strengthen the framework for effective regional and local planning efforts.

## Land Use Element

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### **IX Implementation Program**

This section provides a coordinated set of action plans/objectives for the City designed to carry out the land use plan goals and policies.

**Table 9 - Implementation Program**

Action Plans/Objectives	Corresponding Goal/ Policy
<b>The following address North End Neighborhood Recommendations</b>	Goals are numbered 1 - 4 and are introduced on page 38. Policies associated with Goal 1 are numbered 1.a., 1.b. 1.c., ...and so forth. Policies are found on pages 38 - 44
1. <i>The City will encourage home ownership and improvement of the existing housing stock through residential rehabilitation grants for owner and non-owner occupied single family dwellings and duplexes</i>	3.7, 3.8 ,3.14
2. <i>The City will adopt an Infractions Ordinance and seek other ways to improve the code enforcement system and require that property owners maintain their properties.</i>	1.10, 3.1, 3.7
3. <i>The City will use Traffic Calming strategies to reduce cut-through traffic in residential areas.</i>	1.3, 2.1, 3.1, 3.7, 3.17
<b>The following address Central Neighborhood Recommendations</b>	
4. <i>The City will discourage the development of new "unattractive" storage yards and the City will consider amendments/ programs designed to improve the appearance of existing storage yards.</i>	1.6, 1.7, 1.9, 1.10, 2.1, 3.1, 3.5, 3.10, 3.12
5. <i>The City will revise the Commercial/ Industrial zoning standards to discourage the establishment of tractor-trailer truck, van, or bus storage or parking facilities.</i>	1.5, 1.6, 1.7, 1.9, 1.10 2.1, 3.1, 3.10
6. <i>The City will discourage the development of tractor trailer truck terminals, and storage yards.</i>	1.5, 1.6, 1.7, 1.9, 1.10, 2.1, 3.1, 3.10
Action Plans/Objectives	Corresponding Goal/ Policy
<b>The following address West Side</b>	

## **Land Use Element**

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<b><i>Neighborhood Recommendations</i></b>	
7. <i>The City will encourage home ownership and homeowners efforts to repair and restore existing housing.</i>	1.2, 3.7, 3.8, 3.9
8. <i>The City will encourage further development of neighborhood shopping opportunities.</i>	1.3, 1.5, 2.6, 3.1, 3.2, 3.3, 3.17
9. <i>The Agency will acquire and restore the Los Brisas apartments and establish common ownership and management and maintenance programs..</i>	1.2, 3.1, 3.7, 3.8, 3.17
10. <i>The City will implement the Park Master Plan and acquire and develop a West Side Park.</i>	1.5, 1.11, 1.12, 1.13, 3.7, 3.17
11. <i>The City will consider ways to improve the interface or create buffer areas between existing commercial /industrial areas and residential uses.</i>	1.3, 1.6, 1.8, 1.10, 1.12, 2.1, 3.2, 3.3, , 3.6, 3.7, 3.9
<b><i>The following address Civic Center Neighborhood Recommendations</i></b>	
12. <i>The City will prepare specific plans for the Crescent Heights historical neighborhood and the Central Business District.</i>	1.3, 1.4, 1.5, 2.6, 3.3, 3.7, 3.14, 3.17
13. <i>The City should encourage the repair and renovation of architecturally or historically significant houses by creating incentives to relocate dwellings into the Crescent Heights area. The Crescent Heights neighborhood should be given a special designation and a Specific Plan should be prepared to establish precise district boundaries, guidelines for design, landscaping, house moving projects, etc.</i>	1.2, 1.3, 3.7, 3.14

## **Land Use Element**

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<b>Action Plans/Objectives</b>	<b>Corresponding Goal/ Policy</b>
14. <i>The City should continue to require the undergrounding of overhead utilities when practicable for new development except for high voltage systems (16kv and above).</i>	2.5, 3.7, 3.11
15. <i>The City should coordinate traffic circulation studies and traffic enforcement efforts with the Long Beach Unified School District to improve pedestrian safety and traffic flow in vicinity of Signal Hill School.</i>	2.1, 3.1, 3.9
16. <i>The City will streamline its house-moving ordinance and consider developer impact fee waivers to encourage the relocation of architecturally significant/ historical dwellings into the Crescent Heights Neighborhood.</i>	1.2, 3.7, 3.14
17. <i>The City will encourage mixed-use development to encourage housing near retail centers and transportation corridors.</i>	1.2, 1.3, 1.4, 1.6, 1.9, 3.1, 3.4, 3.17
<b><i>The following address Hilltop Neighborhood Recommendations</i></b>	
18. <i>The City should encourage the continuation of the development of the hilltop with high-quality housing.</i>	1.1, 1.2, 1.3, 1.9, 2.2, 2.6, 3.2, 3.3, 3.12
19. <i>The City should require developers to pay their fair share for improving roads and infrastructure related to their projects.</i>	1.1, 1.6, 1.11, 2.1, 2.5, 3.11
20. <i>The City should follow the recommendations in the Hilltop Area Specific Plan regarding landscaping and the careful planting of trees so as not to create view obstructions.</i>	2.2, 2.3, 3.3

## **Land Use Element**

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Action Plans/Objectives	Corresponding Goal/ Policy
21. Views from existing dwellings should be preserved when feasible, but efforts to preserve views should not infringe on the rights of property owners to develop in accordance with the existing Hilltop Area Specific Plan.	2.1, 3.7
22. The City should encourage the development of a comprehensive system of sidewalks and trails to encourage walking and hiking and the enjoyment of the view from the hilltop.	1.11, 1.12, 1.13, 2.2, 2.3, 2.5, 3.3, 3.11, 3.17
23. The City should consider revision or deletion of the PD-2 zoning district.	5.g.,
<b><i>The following address Southeast Neighborhood Recommendations</i></b>	
24. The City should encourage home ownership through efforts to develop affordable Housing, and home improvement through rehabilitation grants	1.2, 1.4, 3.8, 3.9
24. The City should encourage renovation of existing dwellings, when practicable, or replacement of obsolete housing.	1.2, 3.2, 3.5, 3.7, 3.8, 3.9, 3.14
25. The City should encourage further renewal efforts along Pacific Coast Highway.	1.3, 1.4, 1.8, 1.9, 2.1, 3.1, 3.6, 3.9, 3.10, 3.13, 3.17
<b><i>The following address Atlantic/ Spring Neighborhood Recommendations</i></b>	
26. The City should prepare a Specific Plan and rezone the Atlantic/ Spring Neighborhood for General Industrial and Commercial Use.	1.6, 1.7, 1.9, 1.8, 2.5, 2.6, 3.2, 3.4, 3.6, 3.10

## **Land Use Element**

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Action Plans/Objectives	Corresponding Goal/ Policy
<b><i>The following address issues raised in the Constraints and Issues and Special Management Areas Sections</i></b>	
<b>Residential Density</b>	
27. <i>The City shall provide a range of housing types to meet the needs of the community.</i>	1.1, 1.2, 1.4, 2.2, 3.7, 3.8
28. <i>The City shall provide its fair share of affordable housing consistent with State regulations.</i>	1.1, 1.3, 1.4, 3.7, 3.8, 3.17
29. <i>Developers shall pay their fair share for the cost of providing infrastructure improvement costs.</i>	2.1, 2.5, 3.11
30. <i>Gated communities with private security measures are encouraged to lower public policing costs</i>	
31. <i>The City shall use the Specific Plan process for planning major development projects.</i>	1.3, 1.5, 1.6, 1.8, 2.2, 3.2, 3.6, 3.12, 3.17
<b>Manage Scenic Hillsides</b>	
32. <i>The City shall protect and enhance public viewing areas.</i>	1.13, 2.2, 2.3, 3.3, 3.13
33. <i>The City will discourage the planting of trees that may mature to view obstructing heights through the Site Plan and Design Review process, and encourage property owners to enforce their homeowners' associations rules and regulations concerning tree pruning and landscape maintenance.</i>	2.2, 3.7
<b>Quality Development</b>	
34. <i>The City shall through the Site Plan and Design Review process maintain a high level of control over design and architecture to achieve highest quality development.</i>	1.2, 2.2, 3.7, 3.9, 3.12, 3.13
35. <i>The City shall consider historic preservation when renovating City Hall and Civic Center buildings</i>	

## **Land Use Element**

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<b>Action Plans/Objectives</b>	<b>Corresponding Goal/ Policy</b>
36. <i>The City shall assure long lasting beauty and durable development through providing high quality plan review and inspection of construction.</i>	2.2, 2.4, 3.6, 3.7, 3.8, 3.9, 3.12, 3.16
<b>Revitalize Older Commercial and Industrial Areas</b>	
37. <i>The City shall maintain an attractive oil field by enforcement of the Oil Code landscaping and painting regulations.</i>	1.10, 2.6, 3.2, 3.9, 3.13
38. <i>The City shall strive to improve the appearance of existing storage yard and older industrial properties through creative programs like the Orange Avenue Improvement Program.</i>	1.10, 2.1, 3.2, 3.3, 3.5, 3.6, 3.10, 3.12
39. <i>The City will review and revise as necessary parking lot standards and parking requirements for all land use categories.</i>	1.3, 1.4, 3.7, 3.10, 3.12
<b>Revitalize Older Residential Areas</b>	
40. <i>The City shall encourage the repair and restoration of historically/architecturally significant dwellings.</i>	1.2, 3.7, 3.13, 3.14,
<b>Diversify the City's Economic Base</b>	
41. <i>The City will, through its land use policies, continue to diversify the City's economic base. The City will encourage the growth of the Auto Center and Town Center retail sales tax generating businesses and the development of diversified sources of sales taxes such as business to business sales.</i>	1.1, 1.3, 1.5, 1.6, 1.8, 1.9, 3.6
42. <i>The City shall enforce the Oil Code to minimize the affects of the interactions of oilfield activities and other urban uses.</i>	1.6, 1.10, 2.4, 2.6, 3.2, 3.3, 3.6, 3.9
<b>Address Incompatible Land Uses</b>	
43. <i>The City shall study the nonconforming uses ordinance and mechanisms to abate nonconforming uses over time.</i>	1.6, 1.10, 3.1, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10

## Land Use Element

Action Plans/Objectives	Corresponding Goal/ Policy
<b>Maintain Adequate Public Facilities</b>	
44. The City should improve library services and seek funding to develop a new larger library.	1.11, 3.11, 3.13
45. The City will continue to collect developer impact fees from developers of new projects consistent with the need to upgrade and complete park, sewer, and water, storm drain and circulation master plans.	1.11, 2.2, 3.6, 3.7, 3.11
46. The City shall periodically review and revise developer impact fees to assure that development pays its fair share of the infrastructure costs, and also to assure that developer impact fees do not discourage new development.	1.11, 3.7, 3.8, 3.10, 3.11
<b>Flooding</b>	
47. The City shall require the construction of flood control facilities concurrent with new development.	1.11, 2.2, 3.9, 3.11, 3.13, 3.18, 3.19, 3.20, 3.21
<b>Storm Water Pollution</b>	
48. The City will adopt and implement storm water discharge regulations consistent with state regulations in order to improve water quality of urban runoff and of the Pacific Ocean.	3.7, 3.11, 3.13, 3.17, 3.18, 3.19, 3.20, 3.21, 4.5
49. The City will adopt storm water discharge regulations to improve water quality consistent with state law.	3.7, 3.11, 3.13, 3.17, 3.18, 3.19, 3.20, 3.21, 4.5
<b>Geologic Study Area</b>	
50. The City will periodically adopt the most recent editions of the Uniform Building Codes.	2.2, 3.6, 3.7, 3.8, 3.9, 3.16, 4.2, 4.5
51. The City will consider adopting energy conservation regulations consistent with state law and local needs.	3.7, 3.11, 3.17, 4.5
<b>Schools</b>	
52. The City will consider the formation of its own school district	

## **Land Use Element**

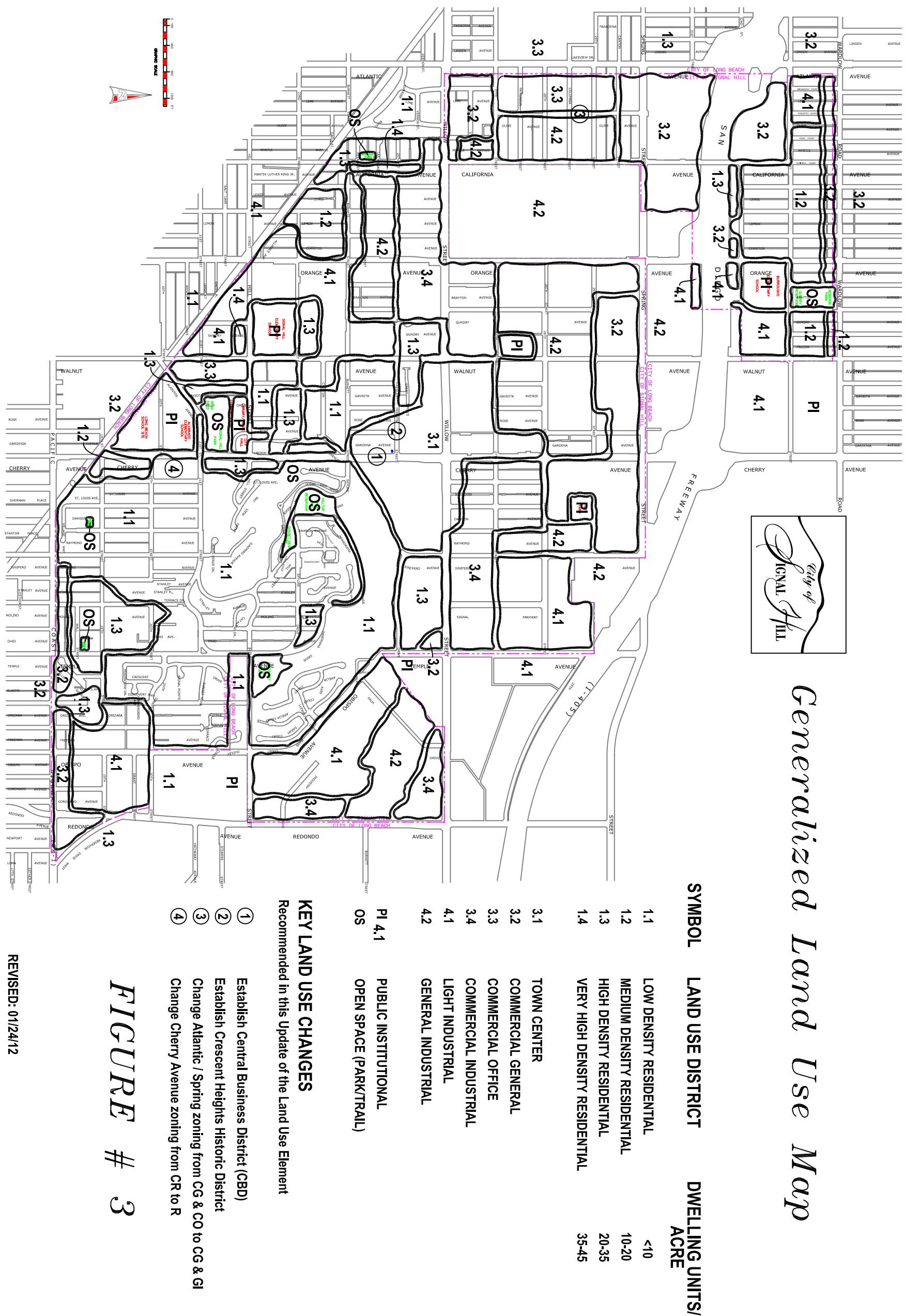
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<b>Action Plans/Objectives</b>	<b>Corresponding Goal/ Policy</b>
53. <i>The City will support the Spring Street Corridor Joint Powers Authority to facilitate the coordination of development projects in the Cities of Long Beach and Signal Hill.</i>	1.5, 1.8, 1.9, 2.1, 2.6, 3.11, 3.13, 3.15, 4.5, 4.7
54. <i>The City should form a joint powers authority or other agreement with the City of Long Beach for the coordinated improvement of PCH</i>	
55. <i>The City will continue to coordinate with the City of Long Beach traffic studies, grant applications, and capital improvement projects to improve the circulation system.</i>	1.11, 2.1, 3.1, 3.11, 3.13, 3.15, 4.5
56. <i>The City will continue the Planning Commission recognition program to encourage homeowners and businesspersons to upgrade and beautify existing development.</i>	1.1, 3.7, 3.8, 3.10, 3.12
57. <i>The City will hold general plan workshops to obtain community input for the general plan and future updates.</i>	1.5, 1.11, 4.1, 4.2, 4.3, 4.4, 4.6
58. <i>The City will prepare an annual report on the implementation of the general plan consistent with state law.</i>	1.11, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7
59. <i>The City will contribute data for the State Department of Finance's annual population estimate program, and monitor U.S. Census information.</i>	3.11, 4.3, 4.5, 4.7
60. <i>The City will monitor state and federal land use legislation which may impact Signal Hill and, when appropriate advocate positions advantageous to the improvement of the City.</i>	3.7, 3.9, 3.11, 3.12, 3.15, 4.5, 4.7
61. <i>The City will continue to use Specific Plans to improve on the quality of new development</i>	1.5, 2.2, 2.6, 3.6, 3.7, 3.9, 3.10, 3.12, 4.1, 4.2
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## **Land Use Element**

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<b>Action Plans/Objectives</b>	<b>Corresponding Goal/ Policy</b>
62. <i>The City will monitor, and when appropriate, support state and federal legislation that maintains or improves local financing capabilities.</i>	1.11, 3.11, 3.13, 3.15, 4.5, 4.6, 4.7
63. <i>The Agency will continue its efforts to implement the Redevelopment Project Area No. 1 as amended.</i>	





## 2021-2029 Housing Element of the General Plan

Adopted by City Council  
September 27, 2022

Certified by the  
Department of Housing and Community  
Development  
October 13, 2022



# CITY OF SIGNAL HILL

## 2021-2029 HOUSING ELEMENT

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**SECTION I  
INTRODUCTION**

# SECTION I

## INTRODUCTION

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### REGIONAL SETTING

The City of Signal Hill is located in Los Angeles County, generally in the southern area of the greater Los Angeles Metropolitan Area. The City is surrounded by the City of Long Beach and is just over two square miles.

The City is regionally accessible from Interstate 405 (San Diego Freeway) which is located to the immediate North. Also, Cherry Avenue and Pacific Coast Highway provide access to the City. The City is approximately three miles north of the large Port of Long Beach and 22 miles south of Downtown Los Angeles.

### HISTORICAL CONTEXT

Signal Hill has a rich and colorful history. Most famous for the discovery of oil in 1921, and commonly known as an "oil town," the City is now a diverse community with an "oil history" and a bright future.

In the 1500s, the Puva Indians used the hilltop to signal other native tribes on Santa Catalina Island, 26 miles offshore. Because of its use as a signaling point, Spanish settlers called the hill "Loma Sental," which translates as "Signal Hill."

Signal Hill's first owner of record was Manuel Nieto, who received the land in 1784 as a grant from King Carlos III of Spain. Nieto later divided the land into six cattle and horse ranchos, two of which encompassed Signal Hill: Rancho Los Alamitos and Rancho Los Cerritos. Later purchased by New Englanders, the ranchos were used mostly for grazing and agriculture in the 1800s. A harsh winter in 1862, drought and other financial hardships resulted in the sale of the ranchos to the Bixby clan, who used the land to raise sheep.

By the turn of the 20th Century, stately mansions dotted the hilltop, as the value of the panoramic view became evident. However, by 1917, the prospect of striking oil on the hilltop surpassed the value of the view and the Union Oil Company drilled the first oil well in the area. The well failed to produce any oil and it was abandoned. Further exploration was suspended until the Royal Dutch Shell Oil Company resumed exploration and hit pay dirt on June 23, 1921. That first "gusher," at Alamitos Well #1, marked a turning point in Signal Hill's history and put the City on the map. Ultimately one of the richest oil fields in the world, it produced over 1 billion barrels of oil by 1984.

Signal Hill had been located in unincorporated Los Angeles County. In 1924, in order to avoid Long Beach's per-barrel tax on oil, Signal Hill's founding fathers voted for incorporation. Right from the beginning, Signal Hill proved to be a progressive city, electing Mrs. Jessie Nelson as the City's first mayor.

Oil production continued to be Signal Hill's mainstay until declining oil prices reduced production in the 1970s. In 1974, the Signal Hill Redevelopment Agency was formed and the city focused on economic development and diversity from oil. Today, Signal Hill is a well-balanced, financially sound and economically diverse community of approximately 11,617 people.

## GOVERNMENT CODE REQUIREMENTS

A housing element is one of the seven mandated elements of the General Plan and it must be updated every eight years unless otherwise extended by legislation. The City of Signal Hill's Housing Element covers the planning period from October 2021 to October 2029. The mandated contents of a housing element are described in great detail in Title 7, Chapter 3, Article 10.6, and Government Code Sections 65580 through Government Code 65589.8. The law governing the contents of a housing element is the most detailed of all elements of the General Plan.

According to Government Code Section 65583:

The housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community.

## ORGANIZATION OF THE HOUSING ELEMENT

In addition to the Introduction, the 2021-2029 Housing Element includes Section II and seven Appendices:

Section II Housing Program: This section presents a summary of housing needs and constraints; a statement of goals, policies, and objectives; and a description of planned actions to address the program requirements of Government Code Section 65583(c).

Appendix A: Assessment of Housing Needs: The Appendix includes data and analysis of existing and projected housing needs.

Appendix B Assessment of Fair Housing: The Appendix contains information on fair housing protected groups; describes fair housing issues; and recommends goals, priorities; and strategies.

Appendix C: Sites Inventory and Analysis: The Appendix identifies the sites that will accommodate the City's share of the regional housing need for above moderate, moderate and lower income housing units.

Appendix D: Governmental Constraints: The Appendix describes actual and potential governmental constraints that hinder the City's ability to address housing needs.

Appendix E: Nongovernmental Constraints: This Appendix describes market conditions that impede the development of housing for all economic segments, including the availability of financing, land costs, and construction costs.

Appendix F: Housing Resources: This Appendix describes financial and administrative resources that can contribute to addressing the City's housing needs.

Appendix G: Progress Report: The Appendix describes the progress the City has made in implementing the actions adopted in the 2004-2021 Housing Element.

## HOUSING ELEMENT CONSISTENCY WITH OTHER GENERAL PLAN ELEMENTS

The Housing Element is one of the State-required Elements of the General Plan and must be consistent with the other Elements. The principles, policies and actions within the Housing Element relate directly to, and are consistent with, other elements of the General Plan. Six elements comprise the Signal Hill General Plan:

- Land Use;
- Circulation;
- Environmental Resources (conservation and open space);
- Safety;
- Noise; and
- Housing

State law requires that the General Plan and all individual elements collectively form an "integrated, internally consistent, and compatible statement of policies." The goals, policies, and programs of this Housing Element are consistent with the goals, policies, and programs contained in other elements of the Signal Hill General Plan. When any element of the General Plan is amended, the City will review the Housing Element and if necessary, prepare an amendment to ensure continued consistency among elements. As part of the Housing Element update the City will be amending the General Plan land use designation for several of the identified sites.

Several new laws require additional General Plan update requirements upon revision of the Housing Element. The City will be updating the General Plan to address safety and environmental justice policies to ensure that information on flood hazard, flood management, fire hazards, evacuation routes, wildfire hazard and risk reduction, and climate adaptation will be up to date. Consistent with State law, the City will initiate a review of the entire General Plan, especially land-use provisions after any subsequent amendment to the Housing Element or other General Plan elements to ensure internal consistency is maintained. Additionally, consistency between the *2021-2029 Housing Element* and General Plan will be maintained through the General Plan Annual Progress Report. This Report, which is completed in April of each year, reports on the status and implementation progress of the General Plan Elements. The Progress Report contains information on the status of General Plan amendments, if any, and how internal consistency will be maintained between the Housing Element and the other five elements.

## OTHER STATUTORY REQUIREMENTS

### Water and Sewer Priority

Government Code Section 65589.7(a) requires the 2021-2029 Housing Element that is adopted by the City Council to be delivered to agencies providing the City's water and sewer services. Each public agency or private entity providing water or sewer services shall grant a priority for the provision of these services to proposed developments that include housing units affordable to lower income households.

The water supply is provided by the Signal Hill Water Department, which relies on both municipal resources and water imports. The Community Development Department will deliver to the Water Department a copy of the Housing Element following its adoption by the City Council. The Department has indicated that it has not adopted procedures to grant priority for the provision of these services to proposed developments that include housing units affordable to lower income households. Program 1.1 is included to address this requirement.

Signal Hill sanitary sewers connect to the City of Long Beach sewer line. Sewage treatment service to the City is provided by the County Sanitation Districts of Los Angeles County Sanitation District (#29). The construction and connection of local sewers and laterals to the district has been and will remain the responsibility of the City of Signal Hill.

The Community Development Department will deliver a copy of the Housing Element to the Sanitation District's Administrative Office (1955 Workman Mill Road, Whittier, CA 90601).

### Flood Hazards and Flood Management Information

Government Code Section 65302 requires all cities and counties to amend the safety and conservation elements of their general plan to include an analysis and policies regarding flood hazard and flood management information upon the next revision of the housing element on, or after, January 1, 2009. The General Plan Safety Element and Environmental Resources Element contains the analysis and policies pertaining to flood hazards and flood management information.

Government Code Section 65302 also requires cities and counties, effective January 1, 2008, to annually review the land use element for those areas subject to flooding identified by flood plain mapping prepared by the Federal Emergency Management Agency (FEMA) or the State Department of Water Resources. The City conducts its annual review as part of the General Plan Annual Progress Report.

## PUBLIC PARTICIPATION AND CONSULTATION

The Housing Element must reflect the values and preferences of the Signal Hill community; therefore, public participation plays a role in the development of this Element. Section 65583(c)(6)(B) of the Government Code states: "The local government shall make diligent effort to achieve public participation of all economic segments of the community in the development of the housing element, and the program shall describe this effort." This process not only includes residents of the community, but also coordinates participation among local agencies and housing groups, community organizations, and housing sponsors.

The following activities were included in the City's public outreach program for the Housing Element update.

## Public Consultation with Stakeholder groups

To ensure that the housing concerns of low- and moderate-income and special needs residents were addressed, the City notified agencies and organizations that serve these communities in Signal Hill and surrounding areas. The City provided Housing Element status reports at City Council and Planning Commission public meetings, published public notices, receiving special Housing Element presentations, and receiving notices in two water bill mailings, and published the Environmental Impact Report for two 45-day public comment periods. The list of agencies and organizations invited to the workshop are listed below and included groups and agencies working with special needs groups, civic and religious groups and housing developers and local businesses.

- Area Agency on Aging
- California Department of Developmental Disabilities
- Southern California Rehabilitation Services for Independent Living
- Disability Rights California
- Harbor Regional Center
- HOPE Housing
- Public Counsel Pro Bono Law Firm
- Los Angeles Homeless Services Authority
- Housing Authority of the County of Los Angeles
- Los Angeles County Department of Public Social Services
- Los Angeles County Community Development Commission
- Housing Rights Center (HRC)
- Gateway Cities Council of Governments
- Southern California Association of Governments (SCAG)
- U.S. Department of Housing and Urban Development – San Francisco Regional Office
- California Department of Housing and Community Development
- California Tax Credit Allocation Committee
- California Housing Partnership
- Terner Center for Housing Innovation
- Community Outreach
  - Diversity Coalition Committee
  - Sustainable City Committee
  - Summer Concerts Series in the Park booth
  - Night-Out –For Crime-Prevention booth
  - Zinnia and Las Brisas I and II property management and residents
  - After-school program parents
  - Visitors to the City Public Library
- Developer Outreach:
  - AMCAL
  - Jamboree Housing Corporation
  - Mercy Housing California
  - Meta Housing Corporation
  - Thomas Safran & Associates
  - Abode Housing
  -

### *Advertisements*

Advertisements for the public outreach events was conducted through several avenues including:

- Public survey of information and inquiry on housing needs and expectations, housing locations and desired services. Hard copies and bar code versions of the survey were made available at City Library, posted on the City web site, social media platforms, and included in water bills
- Flyers: in both English and Spanish
- Social Media Posts
- Mailed notices in utility bills to all households served by the City's Water Department
- Information and flyers on the General Plan/Housing Element website
- Information shared and feedback received at the City's Diversity Coalition Committee (DCC), Youth Center, and American University of Health Sciences
- Invitations to property manager and residents at each of the City's five affordable housing developments.
- Invitation to community members who asked to be included in the direct outreach process
- The City updated its website to include information on the Housing Element update including a schedule, event flyers, documents to review, and a Frequently Asked Questions (FAQ) list.

## DESCRIPTION OF PUBLIC PARTICIPATION ACTIVITIES

### **November 12, 2019, City Council adoption of a resolution authorizing submittal of an SB2 housing grant application:**

The staff report at the public hearing summarized State housing legislation pursuant to the Housing Element and Regional Housing Needs Assessment (RHNA) allocation and preparation for the 6th Cycle HEU document, including the RHNA and site identification to accommodate the RHNA. Site identification would include analysis in conformance with the California Environmental Quality Act (CEQA), implementation of site remediation and mitigation measures to remove constraints to development for which SB2 funding would be utilized.

### **March 24, 2020, City Council General Plan Annual Progress Report (GPAPR):**

The 2020 General Plan Annual Progress Report included an informative section regarding preparation for the upcoming 6th Cycle housing Element Update (HEU), new State legislation and grant opportunities.

### **April 28, 2020, City Council approval to execute a contract services agreement with Castañeda & Associates for use of SB2 funds to prepare the 2021-2029 6th Cycle HEU:**

City Council received a City Managers report which summarized the tasks to be completed for preparation of the 6th Cycle (2021-2029) Housing Element which included:

- Conduct an inventory of candidate sites;
- Prepare affordable housing zoning standards;
- Assist with community outreach;
- Assist with Accessory Dwelling Unit Ordinance and manual; and
- Prepare a Density Bonus Ordinance.

### **Dec. 15, 2020, Planning Commission Directors Report Update on the 6th Cycle HEU:**

The staff report and power point presentation provided information about the requirement and purpose of the housing element and the State mandate to meet the RHNA housing allocation every eight years. The report noted the City's success in constructing 100% of the affordable housing for the 5<sup>th</sup> Cycle, the timeline for the 6<sup>th</sup> Cycle, status of CEQA and housing element consultant's progress, and pending state grants to assist with funding the process of vetting potential housing sites for constraints to development, once identified.

**April 13, 2021, City Council presentation kicking-off public participation activities for development of the 6<sup>th</sup> Cycle HEU:**

The City posted a housing survey on the City's multiple social media platforms (web site, Facebook page, Nextdoor). It was also published in our E-Newsletter, the City Views Newsletter, and water bills. We circulated the link to our three Commissions and to our Sustainable City and Diversity Committees as well as local stakeholders, residents, the local medical university, and we made a presentation at the monthly chamber of commerce luncheon.

The survey provided background information about the requirement and purpose of the housing element and asked the public to provide input to help in development of the document, such as identifying preferred locations and amenities for housing sites. We also set up places for the public to provide additional input beyond the survey questions.

As the second step in the outreach, a short, introductory video was commissioned, which was posted on the City website, made available through the scan of a QR code at the City library, the summer concerts series, and National Night Out.

**May 18, 2021, Planning Commission workshop and environmental scoping meeting for the 6<sup>th</sup> Cycle HEU:**

The staff report provided a summary of the State mandate to meet the RHNA allocation for the 6th Cycle Housing Element, and the strategy to meet the mandate along with progress to date:

- Strategy to meet the RHNA;
- Status of public outreach efforts and an overview of public input to date;
- Overview of the site selection process for housing sites; and
- Schedule for continued outreach, preparation, workshops, public hearings, and adoption of the document.

The City's environmental (CEQA) consultant will conduct a scoping meeting to provide project information and solicit public comments on the pending CEQA analysis for the Project and workshops will be held to introduce the draft HEU document. Public comment was received.

**June 22, 2021, City Council approval of a resolution to participate in the year-2 Permanent Local Housing Allocation (PLHA) grant program:**

The staff report identified steps needed for preparation for the 6<sup>th</sup> Cycle HEU, including the RHNA and site identification to accommodate the RHNA. Site identification would include analysis in conformance with the California Environmental Quality Act (CEQA), implementation of site remediation and mitigation

measures to remove constraints to development for which PLHA funding would be utilized. Public comment was received.

**August 17, 2021, a Planning Commission workshop was held to provide an update for preparation of the 6th Cycle HEU:**

The staff report provided a summary of the community, consultant, business and property owner, city council sub-committee, and HE consultants to identify the 6<sup>th</sup> Cycle HEU sites inventory. The results of the community were reviewed, along with the tax credits financing program qualifications, and multiple other factors contributing to the selection of the housing sites. Conceptual site plans were shared to illustrate the site capacities and ability to accommodate the 6<sup>th</sup> Cycle RHNA and a 15% surplus. Public comment was received. Public comment was received.

**September, 2021, a Planning Commission workshop was held to provide an update for preparation of the 6<sup>th</sup> Cycle HEU:**

The staff report provided the status of the Housing Element update and discussed identified sites. For the 6<sup>th</sup> Cycle HEU sites inventory and draft sections of the Draft Element. Public comment was received.

## PUBLIC SURVEYS

As part of the Housing Element Update, a community survey was circulated online on the City web site and social media platforms, in water bills citywide, at the public library, to parents with children enrolled in the after-school program, to seniors at City senior activities and in newsletters both hard copy and online, to City Committee and City Stakeholders, Commission members, and affordable housing residents and management from April to August, 2021. 150 people responded, split between residents, students, and businesses. Highlights include:

- Question: Respondents were asked to rank areas where housing should be built (1-5, 1 being your first choice).
  - Response: The table indicates that 70% would like housing to be built in the Civic Center neighborhood, followed by 64% located near commercial centers.
- Question: Respondents were asked to rank the type of type of housing needed in the City of Signal Hill (1-6, 1 being the first choice).
  - Response: The table indicates that 71% believe that housing should be available to service workers, 68% noted that housing should be affordable to working professionals, and 63% identified housing should be affordable to service workers.
  - Response: Approximately half believe that proximity to amenities such as grocery stores, religious facilities, schools, etc. are important.
- Question: Respondents were asked to identify the top three development types most suitable for future study to accommodate the mandated RHNA allocation.
  - Response: The re-purposing of former oil property received 67% of the responses.

A public survey was also printed in English and Spanish and emailed to a list of 28 stakeholders and groups including:

- Local realtors
- Members of the chamber and rotary
- Local Business owners
- Local property owners
- Managers of three local affordable housing projects
- The Pastor of a local church group
- HOAs
- The Youth Leadership Group
- Current and past members of the City Commissions
- Members of the City Sustainable City Committee
- The video was also played at the public library and student recreation pick-up and drop-off and shown on the local TV channel 7 times a day from mid-April through early August:

The survey included a section for responders to add additional comments and some that were received include:

- Reduce restrictions to make it economical to build a quality product that enhances the entire community.
- When you plan new housing developments, continue the trail system.
- Allow ADU's, it's a great solution for older people needing supplemental income as well as young people having a more affordable option.
- Easing of zoning restrictions and faster approval to re-purpose existing structures or build new structures for housing.
- Make housing affordable and available.
- Move forward on the trendy development around Mother's Market.
- Need more single-family standalone houses.
- Affordable w assistance.
- If you build more housing, make sure that families have somewhere to park their cars.
- Need to have more affordable housing for homeless, single mothers or fathers, help families qualify for new homes that are affordable and not expensive.
- More affordable housing, open a Section 8 program, more program for disabled and homeless.
- Remove any oil well sites that are no longer in use.
- Provide a mixture of high, moderate, and low-density housing.

## GENERAL PUBLIC OUTREACH THEMES

The City considered and incorporated the major themes identified during the public outreach program not only on its approach to meeting its identified housing need (expanding housing opportunities for all economic segments of the community), but in including programs and actions that address housing needs of Signal Hill residents most particular related to the cost and affordability of housing – which was the major theme that emerged. The City's rezoning program to address the 6th cycle RHNA reflects an expansion in housing opportunities in non-residential areas of the City.

Several key findings in the survey addressed the need for more housing:

- Question: Respondents were asked to rank areas where housing should be built (1-5, 1 being your first choice).
  - Response: The table indicates that 70% would like housing to be built in the Civic Center neighborhood, followed by 64% located near commercial centers.

- Result: the Housing Element includes four sites to meet the RHNA and all are located within one half mile of the City's Civic Center.
- Question: Respondents were asked to rank the type of housing needed in the City of Signal Hill (1-6, 1 being the first choice).
  - Response: The table indicates that 71% believe that housing should be available to service workers, 68% noted that housing should be affordable to working professionals, and 63% identified housing should be affordable to service workers.
  - Result: the Housing Element includes two sites to meet the lower income RHNA and the City is working with the property owner to prepare the site for development of affordable housing that will occur through an RFP process.
- Question: Respondents were asked to rank the items they consider the highest priority when it comes to housing developments.
  - Response: Approximately half believe that proximity to amenities such as grocery stores, religious facilities, schools, etc. are important.
  - Result: the four sites to meet the RHNA were chosen partly based on their locations near services, shops, schools public transit, a park and community center.
- Question: Respondents were asked to identify the top three development types most suitable for future study to accommodate the mandated RHNA allocation.
  - Response: The re-purposing of former oil property received 67% of the responses.
  - Result: the Housing Element includes four sites to meet the RHNA and all are on properties with oil extraction activities that will be repurposed for development of housing. The City is working with the property owner to prepare the site for development of housing that will occur through an RFP process.

The two workshops during August and September 2021 included the following feedback:

- Future developers should consider hiring local union labor for construction, as a means to improving air quality
- Several community members gave feedback on the Heritage Square site including asking for a reduction in the number of units, expressing concerns regarding increased traffic on Crescent Heights Street, and ingress/egress routes for the proposed development, and considerations for stormwater compliance. Several persons commended the Heritage Square site plan as it incorporated input from previous community meetings and workshops and expressed concerns related to the proposed design of the development and emphasized that the architecture should be consistent with the existing historic district properties
- One community member requested that TESLA super charging stations be installed at the future proposed mixed-use sites
- One community member identified multiple City requirements that assess potential environmental hazards including the Phase I and Phase II Environmental Site Assessments, the Human Health Risk Assessment, the City's most current Oil and Gas Code, and a Mitigation Monitoring Program which is required if hazards are identified per CEQA.
- One community member made comments related to cultural sensitivity and encouraged the construction of more low- to moderate-income housing

The City conducted a multi-step site selection process that included community input on site selection criteria as part of the public survey, input into the specific sites selected, and input into the proposed conceptual site plans.

## AFFIRMATIVELY FURTHERING FAIR HOUSING (AFFH)

State law requires that the preparation, adoption, and implementation of a housing element includes a diligent effort to include public participation from all economic segments of the community. A diligent effort means going beyond simply giving the public an opportunity to provide input and should be proactively and broadly conducted through a variety of methods to assure access and participation. As part of the Housing Element update, the City of Signal Hill proactively engaged the community through a variety of avenues including digital/social media outreach, a resident survey, informational video, focus groups with stakeholder and developers, community workshops, and direct email to stakeholder groups. To ensure all residents regardless of language spoken were included, all advertisements, flyers, and surveys were available in Spanish.

To affirmatively further fair housing:

1. *Outreach plans should consider geographic barriers to participation and should plan to hold in-person meetings in various locations to ensure residents from across the jurisdiction can participate.*

The Draft Housing Element was drafted during 2020 and 2021 and Covid-19 pandemic public gathering limitations were still in place. As a result, the outreach meetings were conducted through teleconferencing.

2. *Meetings should be held outside of work hours, including on evenings and weekends, to facilitate participation.*

All workshops and meetings were conducted in the evening. The survey was available from April to August, 2021 which allowed for access during a variety of days and times.

3. *Drafts of the housing element should be made available to the public for review and comment with ample time before submission to the Department of Housing and Community Development (HCD) for review.*

The City released the Public Review Draft concurrent with its submittal of the initial Draft Housing Element to HCD but had conducted 4 workshops with the City Council and Planning Commission to present the draft Element prior to submittal. In addition, the City conducted a multi-step site selection process that included community input on site selection criteria as part of the public survey, input into the specific sites selected, and input into the proposed conceptual site plans. The Draft continued to be made available to the public for input during the 60-day period that the Element was under review by HCD. The Public review draft was distributed to local agencies and organizations that serve these communities in Signal Hill and surrounding areas. The community was notified of the opportunity to comment on the Draft through posts on the City's dedicated Housing Element webpage and via social media. Moving forward, revisions to the Draft Housing Element will be released to the public prior to resubmittal to HCD.

4. *In-person and electronic options for participation should also be made available.*

The Draft Housing Element was drafted during 2020 and 2021 and Covid-19 pandemic public gathering limitations were still in place. As a result, the outreach meetings were conducted through teleconferencing. Electronic options were provided to the community to provide input on the Draft Housing Element and participation in the survey. The Diversity, Equity, & Inclusion

survey included 704 city residents recruited via mail, email, text, and phone. Data collection was via phone and online and was conducted in English, Spanish, Khmer and Korean.

To ensure that the housing concerns of special needs groups and other typically hard to reach groups during the outreach process were addressed, the City notified agencies and organizations that serve these communities in Signal Hill and surrounding areas. The list of agencies and organizations invited to the workshop included groups and agencies working with special needs groups, civic and religious groups and housing developers and local businesses. The list is included in the previous section of this Chapter.

### **Outreach Activities**

As discussed earlier in this chapter, the City's outreach activities utilized a variety of methods, broad and proactive marketing, included targeted needs groups, promoted language access, and included consultation with relevant organizations. These goals are consistent with the state's AFFH mandate.

To gather information from the development community, the City sent surveys and conducted focus groups with local non-profit and for-profit developers.

- Advertisements for the public outreach events was conducted through several avenues including:
- Flyers: in both English and Spanish
- Social Media Posts
- Mailed notices in utility bills to all households served by the City's Water Department
- Information and flyers on the General Plan/Housing Element website
- Information shared and feedback received at the City's Diversity Coalition Committee (DCC), Youth Center, and American University of Health Sciences
- Invitations to property manager and residents at each of the City's five affordable housing developments.
- Invitation to community members who asked to be included in the direct outreach process
- The City updated its website to include information on the Housing Element update including a schedule, event flyers, documents to review, and a Frequently Asked Questions (FAQ) list.

Findings from the City survey relevant to the AFFH analysis include concern about the availability of affordable housing and land accessible to non-profit developers and limited capacity of services and housing for homeless individuals. All these issues area addressed in the housing plan and in the City's sites inventory strategy.

In 2020, the City Council approved a draft Race and Equity Framework which focuses on racial equity through thoughtful review of City practices and procedures such as budget and finance, employee conduct, ethics, hiring and promotion practices, training, and other policies and standards. As part of the Race and Equity Framework, City Council committed to the formation of a Diversity Coalition Committee (DCC) to examine the City's current policies and engage the community on various aspects of race and equity as part of an evolving effort to address systemic racism and bias in the policies and practices of municipal government. The proposed goals of the DCC are focused on three specific areas: education, facilitation, and continuous improvement. To understand community needs and how residents and businesses view Signal Hill's handling of diversity and equity the City conducted a Diversity, Equity, & Inclusion survey in January 2022. The mixed-method approach survey included 704 city residents recruited via mail, email, text, and phone. Data collection was via phone and online and was conducted in English, Spanish, Khmer and Korean. The results of the survey are key to identifying actions to address systemic racism and bias in the policies and practices of municipal government. In 2021, the DCC asked

the City Council to fund a list of projects including the survey summarized above. Additional efforts will include outreach at City events, race and equity training for staff, affordable housing and economic development programs. Findings from the Diversity, Equity, & Inclusion survey relevant to the AFFH analysis include:

- Renter and lower income households indicated overall lower satisfaction with access to items, services and amenities compared with homeowners with the lowest satisfaction in the areas of affordable housing, healthcare, and social services. Satisfaction was similar across different ethnic groups.
- When asked if they agreed that the city is inclusive in its approach to governing and wants to hear from all individuals and groups, 56% agreed and 15% disagreed. Responses were similar across different ethnic groups.
- When asked if the City treats all residents the same regardless of their color, income, age or identity, 51% agreed and 15% disagreed.
- When asked if all neighborhoods receive the same quality of services from the City, 37% agreed and 27% disagreed.
- When asked if persons like the respondent face discrimination in Signal Hill and don't have the same opportunities as others, 15% agreed and 59% disagreed. More African American residents agreed with this statement than other residents.
- When asked if the Signal Hill Police Department treats people fairly, regardless of their race, income, or identity, 49% agreed and 14% disagreed. Among ethnic groups, African American residents agreed less with this statement than other residents.

Action items related to the findings of the survey and the work of the DDC have been added to Program 5.2.

#### **Sites Inventory**

Findings from the City's outreach activities relevant to the AFFH analysis helped direct the City's RHNA strategy for identifying the location of new housing. With the City's limited availability of land, respondents identified the re-purposing of former oil property as the most suitable for accommodating new housing. The City's residential neighborhoods are primarily built out. Future residential development will likely occur on land that is or was in use for oil extraction. This RHNA strategy relies on rezoning oil production sites for the development of housing. All RHNA sites are located within one half mile of each other due to the small size of the City (2.2 square miles) and as such demographic patterns and trends vary only slightly and no significant disparities are identified. The four sites identified in the Sites Inventory are located within the center of the City near services and transit. No sites are located east of this area due to constraints posed by slope instability and a lack of adequately sized parcels. Two affordable sites are in an area with no housing – the City chose this area to start opening this area to housing to expand opportunities for housing City residents.

Below is a sample of questions, responses and how the sites inventory responded to those results.

- Question: Respondents were asked to rank areas where housing should be built (1-5, 1 being your first choice).
  - Response: The table indicates that 70% would like housing to be built in the Civic Center neighborhood, followed by 64% located near commercial centers.
  - Result: the Housing Element includes four sites to meet the RHNA and all are located within one half mile of the City's Civic Center.

- Question: Respondents were asked to rank the type of housing needed in the City of Signal Hill (1-6, 1 being the first choice).
  - Response: The table indicates that 71% believe that housing should be available to service workers, 68% noted that housing should be affordable to working professionals, and 63% identified housing should be affordable to service workers.
  - Result: the Housing Element includes two sites to meet the lower income RHNA and the City is working with the property owner to prepare the site for development of affordable housing that will occur through an RFP process.
- Question: Respondents were asked to rank the items they consider the highest priority when it comes to housing developments.
  - Response: Approximately half believe that proximity to amenities such as grocery stores, religious facilities, schools, etc. are important.
  - Result: the four sites to meet the RHNA were chosen partly based on their locations near services, shops, schools public transit, a park and community center.
- Question: Respondents were asked to identify the top three development types most suitable for future study to accommodate the mandated RHNA allocation.
  - Response: The re-purposing of former oil property received 67% of the responses.
  - Result: the Housing Element includes four sites to meet the RHNA and all are on properties with oil extraction activities that will be repurposed for development of housing. The City is working with the property owner to prepare the site for development of housing that will occur through an RFP process.

The City will continue to employ a wide variety of media and methods to notify the public of important housing decisions and opportunities to provide input, including the revised Draft document revised pursuant to HCD initial comments.

**SECTION II**  
**HOUSING PROGRAM**

# SECTION II

## HOUSING PROGRAM

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Government Code Section 65583(c) requires that a housing element include:

*A program which sets forth a five-year schedule of actions the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the housing element....*

The Housing Program must:

- Identify Actions to Make Sites Available to Accommodate the City's Share of the Regional Housing Need That Could Not Be Accommodated on the Sites Identified in the Land Inventory [Government Code Section 65583(c)(1)]
- Assist in the Development of Adequate Housing to Meet the Needs of Extremely Low, Very Low-, Low- and Moderate-Income Households [Government Code Section 65583(c)(2)]
- Address and, Where Appropriate and Legally Possible, Remove Governmental and Nongovernmental Constraints to the Maintenance, Improvement and Development of Housing Including Housing for All Income Levels and Housing for Persons with Disabilities [Government Code Section 65583(c)(3)]
- Conserve and Improve the Condition of the Existing Affordable Housing Stock [Government Code Section 65583(c)(4)]
- Promote and Affirmatively Further Fair Housing Opportunities throughout the Community or Communities for All Persons Regardless of Race, Religion, Sex, Marital Status, Ancestry, National Origin, Color, Familial Status, or Disability [Government Code Section 65583(c)(5)]
- Preserve for Lower Income Households the Assisted Housing Developments at Risk of Conversion to Market Rate Housing [Government Code Section 65583(c)(6)]

The City does not have an affordable housing development at risk of conversion to market rate housing.

Table II-1 shows the individual programs that address each of the five mandated program categories.

**Table II-1: 2021-2029 Housing Program**

Program Category	List of Individual Programs
<b>Category 1 – Identify Sites to Accommodate the City’s Share of the Regional Housing Need</b>	1.1 Adequate Sites Program 1.2 No Net Loss Program
<b>Category 2 - Assist the Development of Lower Income and Moderate-Income Housing</b>	2.1 Housing Choice Voucher Rental Assistance Program 2.2 First Time Homebuyer Assistance 2.3 Waiver of Development Impact Fees 2.4 Special Needs Program
<b>Category 3 - Remove Governmental and Nongovernmental Constraints to Housing</b>	3.1 ADU Ordinance and Incentives Program 3.2 Density Bonus Ordinance 3.3 Zoning Ordinance Amendments Program 3.4 SB 35 Development Streamlining Program 3.5 Energy Conservation
<b>Category 4 – Conserve and Improve the Existing Stock of Affordable Housing</b>	4.1 Housing Code Enforcement 4.2 Housing Rehabilitation 4.3 Accessibility Modifications Program
<b>Category 5 - Promote Housing Opportunities For All/Affirmatively Furthering Fair Housing</b>	5.1 Fair Housing Information and Services Program 5.2 Affirmatively Furthering Fair Housing

**PROGRAM CATEGORY #1:****ACTIONS TO MAKE SITES AVAILABLE TO ACCOMMODATE THE RHNA**

Section 65583(c)(1) states that the housing program must:

*Identify actions that will be taken to make sites available during the planning period with appropriate zoning and development standards and with services and facilities to accommodate that portion of the city’s ... share of the regional housing need for each income level that could not be accommodated on sites identified in the inventory ... without rezoning...*

## Housing Needs Summary

The Southern California Association of Governments (SCAG) Region’s housing need was determined by the State Department of Housing and Community Development (HCD). The SCAG “region” encompasses the counties of Ventura, Los Angeles, Orange, Riverside, San Bernardino and Imperial.

The City must identify sites that can accommodate its share of the regional housing need. The total regional need is 1,341,827 housing units. Signal Hill’s share is 517 housing units.

Table II-2 shows the allocation of 517 housing units to five income groups. The very low-income group is divided into “extremely low (0-30% of county median income) and very low (30-50% of county median income). The lower income housing need is 239 housing units.

**Table II-2: Share of Regional Housing Needs**  
**June 30, 2021 – October 15, 2029**

Income Group	Number	Percent
Extremely Low	80	15.5%
Very Low	81	15.5%
Low	78	15.1%
Moderate	90	17.4%
Above Moderate	188	36.5%
Total:	517	100.0%

Source: Southern California Association of Governments, 6th Cycle Final RHNA Allocation Plan (approved by HCD on 3/22/21) and modified on 7/1/21

## Goals

- Accommodate the housing needs of all income groups as quantified by Regional Housing Needs Assessment (October 2021- October 2029).
- Facilitate the construction of the maximum feasible number of housing units for all income groups.

## Policies

- Designate sites that provide for a variety of housing types.
- Implement the Orange Bluff and Walnut Bluff Specific Plans to achieve the production of housing that meets the City's share of the regional housing need.
- Conduct remediation and mitigation measures as identified in the Environmental Impact Report prepared for all 6th Cycle housing sites to remove constraints to development, prior to marketing lower income sites to potential affordable housing developers (these same steps were taken to ensure the successful development of the most recent Zinnia affordable project completed in 2018, and fully occupied). It is important to note that Signal Hill managed to have 100 percent of the 5th Cycle lower income housing projects constructed during the 5th Cycle and all units are occupied.

### Program 1.1 Adequate Sites Program

To accommodate the RHNA of 517 housing units, the City of Signal Hill will rezone 4 sites totaling over 27 acres of non-vacant land to allow residential uses at varying densities by October 15, 2022. The capacity of the identified sites (including ADU estimates) is 732 housing units. Once appropriate land use and zoning actions are taken, the City can adequately accommodate the 6<sup>th</sup> cycle RHNA.

Two sites, Orange Bluff and Walnut Grove, will be used to meet the lower- and moderate-income RHNA and will be rezoned to SP 7 Special Purpose Housing Zoning, allowing exclusively residential uses at 35 to 45 dwelling units per acre. The capacity of the Orange Bluff site is 290 housing units (274 will be used to meet the lower income RHNA and 16 will be used to meet the moderate-income RHNA). The capacity of the Walnut Bluff site is 90 units, (A minimum of 74 and a maximum of 90 will be used to meet the moderate income RHNA). State law, and HCD guidance, state that if sites used to address the lower-income RHNA (extremely/very low- and low-income sites) require rezoning and the rezoning occurs after the planning period has begun, those sites are subject to additional requirements under State law. Consistent with Government Code 65583.2[h]) the Orange Bluff site will:

- Be rezoned to permit owner-occupied and rental multifamily residential use by-right for developments in which at least 20 percent of the units are affordable to lower-income households during the planning period; and
- Permit at least 16 units per site at a density of at least 20 units per acre

The two sites that will be used to address the above moderate-income RHNA, Town Center Northwest and Heritage Square will have allowable densities of 20 to 35 units per acre and less than 10 units per acre respectively. The Orange Bluff and Walnut Bluff sites will be subject to reduced parking requirements.

The City will adopt development standards presented in Table C-5 in Appendix C. The standards to be used for the two, lower- and moderate-income sites are modeled on the most recent affordable housing development in the City (also included in Table C-5 for comparison).

The City and property owner Signal Hill Petroleum (SHP) will have led the initial efforts to re-zone and remove constraints to development for the Walnut Bluff and Orange Bluff sites by completing all environmental analysis and having an Environmental Impact Report prepared and circulated to the State for public comment. The next steps for eliminating constraints to development of the sites will be to complete any associated oil production remediation, which will also be conducted by SHP, as is the standard procedures for most development sites in the City and as was completed for the most recent 72-unit affordable housing project, Zinnia Apartments. The City will use funds from Permanent Local Housing Allocation (PLHA) program to pay for site cleanup and remediation activities. The City will initiate a Request for Proposal to contract an affordable housing developer once remediation is underway. These are the same methods the City used to successfully complete construction of 100 percent of the 5th Cycle affordable housing sites, including the most recent 72-unit Zinnia project completed in 2018 and fully occupied. These efforts by the property owner and the City maximize the likelihood that development will occur on the sites consistent with the capacity and affordability estimates in this Element and that the development will occur within the planning period. Development impact fees will be waived for the two sites used to address the affordable RHNA categories (Orange Bluff and Walnut Bluff) as was successfully accomplished with all 5th Cycle affordable housing projects.

The City will submit the adopted Housing Element to all water and sewer service providers—including internal City departments—in accordance with Government Code Section 65589.7 and coordinate with relevant contacts regarding their review and input. The City provides water services in Signal Hill. Sewer service is provided by Los Angeles County. The City has not yet adopted procedures to grant priority for the provision of water services to proposed developments that include units affordable to lower-income households as required by law, however, needed water capacity has been analyzed and was determined to be more than sufficient for all the 6ht Cycle RHNA units as part of the Environmental Impact Report prepared in anticipation of the zoning amendments for the sites to be adopted prior to October 2022. The City's water department will adopt required procedures to grant priority for the provision of water and sewer services to proposed developments that include units affordable to lower-income households following the zoning amendments as required by Government Code 65589.7.

**Objective:** Designate sites that will provide the opportunity for the development of at least 509 units (remaining RHNA once approved units are subtracted).

**Responsible Agency:** Community Development Department

**Timeline:** Conduct a thorough environmental and health assessment for development of housing on sites identified in the Housing Element by December 2021; Rezoning actions (including CEQA analysis) to be

completed by October 2022 including adoption of Special Planning area 7 with adjusted developments standards for the Walnut Bluff and Orange Bluff sites; Request for Proposal to be issued by April 2023; Interview interested developers and select the best qualified private or non-profit developer July 2023; Enter into development agreements to guide development of all four sites as presented in this Housing Element and include a commitment to oil production remediation in the agreements by December 2023; Site remediation to be completed once developer is identified (by December 2023), ongoing implementation and annual assessment of status of housing sites inventory as part of the annual reporting process; submit the adopted Housing Element to water and sewer service providers within 30 days of adoption of Element; Adopt required procedures to grant priority for the provision of water services to proposed developments that include units affordable to lower-income households as required by Government Code 65589.7 within two years of Housing Element adoption. The City of Signal Hill does not have jurisdiction over sewer service procedures as those are provided by the Sanitation Districts of Los Angeles County. Instead, The City will alert the Sanitation Districts of Los Angeles County of the requirements under Government Code §65589.7 and ask for confirmation that the District has procedures in place to grant priority for the provision of sewer services to proposed developments that include units affordable to lower-income households as required by law within two years of Housing Element adoption.

**Funding Source(s):** SB 2/Permanent Local Housing Allocation (PLHA), Local Early Action Planning (LEAP), Innovation Grants, and General Fund General Plan Reserve account.

### **Program 1.2 No Net Loss Program**

To ensure sufficient residential capacity is maintained to accommodate the RHNA for each income category, within one year of adoption of the *2021-2029 Housing Element*, develop and implement a formal, ongoing (project-by-project) evaluation procedure pursuant to Government Code section 65863. The evaluation procedure will track the number of extremely low-, very low-, low-, moderate-, and above moderate-income units constructed in order to calculate the remaining unmet RHNA. The evaluation procedure will also track the number of units built on the identified sites to determine the remaining site capacity by income category and will be updated continuously as developments are approved.

No action can be taken to reduce the density or capacity of a site (e.g., downzone, moratorium), unless other additional adequate sites are identified prior to reducing site density or capacity.

If a development is being approved on an identified site at a lower density than what was assumed for that site identified in the *2021-2029 Housing Element*, additional adequate sites must be made available within 180 days of approving the development. A program to identify the replacement sites and take the necessary actions to make the site(s) available and ensure they are adequate sites, will be adopted prior to, or at the time of, the approval of the development.

After adopting an evaluation procedure, the City will monitor rezones and development of residential units and update the sites inventory. The sites inventory will be posted on the Community Development Department's website and will be updated at least once a year.

At least annually, the City update, if necessary, the sites inventory in conjunction with the Housing Element Annual Reports pursuant to Government Code section 65400.

**Objective:** Develop and maintain a no net loss evaluation procedure.

**Responsible Agency:** Community Development Department

**Timeline:** Within one year of adoption of the *2021-2029 Housing Element*, develop and implement a formal ongoing evaluation procedure pursuant to Government Code section 65863.

**Funding Source(s):** SB 2/PLHA/LEAP/Innovation Grant funds or General Fund.

**PROGRAM CATEGORY #2:**

***ASSIST IN THE DEVELOPMENT OF ADEQUATE HOUSING TO MEET THE NEEDS OF ALL ECONOMIC SEGMENTS***

Government Code Section 65583(c)(2) states that a housing program shall:

*Assist in the development of adequate housing to meet the needs of extremely low-, very low-, low- and moderate- income households.*

**Housing Needs Summary**

Appendix A describes the City's housing needs. Table II-3 presents a summary of the assessment of housing needs

**Goals**

- Reduce the number of cost burdened lower income households.
- Reduce the number of crowded lower income households.
- Increase the number of moderate income, first-time homebuyers.

**Policies**

- Provide Section 8 rental assistance to extremely low-, very low, and low-income households through the programs administered by the Housing Authority of the County of Los Angeles
- Provide information to residents about financial assistance available to first time homebuyers.
- Facilitate the construction of new housing affordable to lower income households.
- Ensure the affordability of new affordable housing developments through long- term affordability covenants.

**Special Needs Policies**

Elderly

- To relieve housing cost burdens, continue to participate in the Section 8 rental assistance program.
- To expand housing choices at potentially reduced costs, implement incentives for ADU development. (see Program 3.1)
- Promote a senior housing development at the Orange Bluff affordable housing site.
- Provide financial assistance, if funding becomes available, to help owners make home modifications.

**Disabled**

- To relieve housing cost burdens, continue to participate in the Section 8 rental assistance program.
- Promote and make the community aware of the Reasonable Accommodation Procedure.
  - Provide information to apartment owners, property management companies and on-site property managers regarding reasonable accommodations, reasonable modifications; and service and companion animals.
  - Coordinate with the Disabled Resource Center to promote independent living services.
  - Maintain the Sea Breeze as a special needs housing development.
  - Provide financial assistance, if possible, to make home modifications.

#### Developmentally Disabled

- Work with the Harbor Regional Center the need for home modifications in homes occupied by persons with developmental disabilities.
- Post on the City's website information on the services and resources available from the Harbor Regional Center.
- Work with HOPE Housing and Disabled Resource Center the opportunities that may be available to transition developmentally disabled persons from an institutional setting to a home environment.

#### Large Families

- Maintain the affordable rental housing with three or more bedrooms.
- Promote the County's Homeownership Program (HOP) to enable large renter families to buy a home with enough bedrooms.
- Create incentives including funding resources for the development of ADUs.
- Promote a large family housing development at the Orange Bluff affordable housing site.

#### Female Householders

- Work with the Housing Rights Center to ensure that female householders are free from housing discrimination on the basis of sex and familial status.
- Amend the Zoning Ordinance to comply with State law that addresses the special needs of female householders (AB 234).

**Table II-3: Assessment of Housing Need Summary**

	# of Renter Households	# of Owner Households
Cost Burden	1,295	525
Severe Cost Burden	560	200
Overcrowded Households (1.01+ persons per room)	248	34
Overcrowded Households (1.51+ persons per room)	72	0
At-Risk Housing	No existing affordable housing is at risk of conversion to market rate housing in the next 10 years	
Special Housing Needs		
Elderly	Almost 1,200 elderly households (62+) live in Signal Hill 53% of elderly householders 65+ live alone 35% of elderly householders 65+ are married couples	

**Table II-3: Assessment of Housing Need Summary**

	# of Renter Households	# of Owner Households
	Some of elderly householders have lower income and a high number and percentage of them probably experience cost burdens and severe cost burdens	
Frail Elderly	114 elderly persons 65+ are estimated to be frail 180 elderly persons 65+ have a propensity to fall multiple times during a year	
Persons with Disabilities	788 persons are estimated to be disabled (6.9% of the total population) 692 households have one or more disabled member 21 % of the households with a disabled member live alone	
Persons with Developmental Disabilities	99 persons are served by the Inland Regional Center 89 live in a home 0 live in a care facility	
Large Families	Approximately 114 owner large families live in the City Approximately 280 renter large families live in the City	
Farmworkers	0 persons are employed in the farming, fishing and forestry occupations	
Female Householders	Approximately 1,425 female householders live in the City	
Homeless	The homeless population is estimated to be 46 persons	

Source: Appendix A Assessment of Housing Needs

### **Program 2.1 Housing Choice Voucher (Section 8) Rental Assistance Program**

The Housing Authority of the County of Los Angeles (HACOLA) administers the Section 8 Housing Choice Voucher Program in the unincorporated area and 62 cities, including Signal Hill. This program contributes to achieving the goals of reducing overpaying and crowding. The rental assistance program reduces monthly rental costs for extremely low and very low-income households.

In order to assist the Housing Authority, staff in program implementation, the City will do all of the following:

- Advertise and promote regional housing assistance programs throughout the City. Include information on both on the City's website under the "Fair & Affordable Housing Resources" web page. Provide HCD/HACOLA information on the website in alternative languages. Target outreach to residents in geographic areas of higher need or lower-income or housing opportunities. Target outreach related to program participation in higher opportunity areas to rental/property managers and housing assistance service providers.
- Assist the Housing Authority in conducting a Landlord Outreach Program.
- Inform the Housing Authority staff of the City's initiatives to provide affordable housing through the existing housing stock.
- Work with the Housing Authority staff opportunities for use of the Section 8 program in ADU developments.

**Objective:** Provide rental assistance to an annual average of 40 to 60 households. **Responsible Agency:** Housing Authority of the County of Los Angeles and Community Development Department.

**Timeline:** Ongoing throughout the 2021-2029 planning period; Quarterly contact with County Housing Departments and groups for promotion of programs and assistance; update City website with regional housing assistance programs information by December 2022. By June 2023, send direct outreach related to the Housing Choice Voucher Program to affordable housing residents in geographic areas of higher need or lower-income and to rental/property managers and housing assistance service providers in higher opportunity areas.

**Funding Source(s):** Housing Authority's Section 8 contract with the U.S. Department of Housing and Urban Development.

### Program 2.2 First Time Homebuyer Assistance Program

The City no longer has monies in an affordable housing fund due to the forced dissolution of the Signal Hill Redevelopment Agency. There are non-City programs, however, which provide financial assistance to first time homebuyers. The City will promote through post on its City website and on social media, information on two County programs which include:

- County Homeownership (HOP) Program; and
- County Mortgage Credit Certificate (MCC) Program

HOP is financed with HOME funds provided through the U.S. Department of Housing and Urban Development (HUD) and is subject to the applicable federal regulations. Designed to meet the needs of low-income families, HOP provides loans of up to 20% of the purchase price for down payment and closing costs assistance not to exceed \$75,000. Each loan is a second Trust Deed loan provided at 0% interest with all payments deferred until sale, transfer, refinancing, no longer owner-occupied, or full repayment of the first mortgage. HOP loans are available to first-time homebuyers in the unincorporated areas of Los Angeles County and cities participating in the Community Development Block Grant (CDBG) Urban County Program. Signal Hill participates in the Urban County Program.

The MCC Program offers qualified first-time homebuyers a federal income tax credit. The federal credit can reduce potential federal income tax liability, creating additional net spendable income for qualified first-time homebuyers to possibly use toward their monthly mortgage payment. The MCC Program enables qualified first-time homebuyers to convert a portion of their annual mortgage interest into a direct dollar for dollar tax credit on their U.S. individual income tax returns. The qualified homebuyer is awarded a tax credit of up to 20% of the annual interest paid on the mortgage loan. The remaining 80% of the mortgage interest will continue to qualify as an itemized tax deduction.

**Objective:** Provide down payment assistance to three households during the 2021-2029 planning period.

**Responsible Agency:** Los Angeles County Development Authority.

**Timeline:** The City will continue to participate in the Urban County Program throughout the eight-year planning period; Hold at least two seminars for new homebuyer assistance, target outreach related to seminars to residents in geographic areas of higher need or lower income; Quarterly contact with County Housing Departments and groups for promotion of programs and assistance; Annual outreach to local entities for promotion and coordination of assistance programs.

**Funding Sources:** HOME funds and federal income tax credits administered by the Los Angeles County Development Authority.

### Program 2.3 Waiver of Development Impact Fees

Affordable housing developments are exempt from the three impact fees for parks, water and traffic. Sections 21.40.040, 21.44.050 and 21.48.050 of the Zoning Ordinance state that these fees:

"... shall not apply to new construction of residences which are sold or leased at rates affordable to very low- and low-income persons. To qualify for this exemption, the applicant must submit an agreement in a form acceptable to the city attorney binding the development project to a guarantee that the assessable

lot area shall remain affordable to low and very low-income persons for a period of not less than twenty years, and making the city a party to the covenant such that the restriction is enforceable by the city."

The current (July 2021) per unit fees are:

#### Parks and Recreation

Single family dwelling	\$21,910
Multi-family dwelling	\$15,112
Water SD Meter of 1"	\$21,437
Traffic (all residential)	\$540.47

**Objective:** Continue to waive development impact fees for affordable housing developments; provide fee waivers for two projects within the planning period.

**Responsible Agency:** Community Development Department and Finance Department.

**Timeline:** Ongoing throughout the 2021-2029 planning period.

**Funding Source(s):** Waived development impact fees.

#### Program 2.4 Special Needs Housing Program -

Provide housing opportunities to meet the needs of special needs residents—including seniors, residents with disabilities and developmental disabilities, large families, extremely, very low, low, and moderate-income households, and those experiencing homelessness—by allowing for development standard incentives, including reduced parking standards, setbacks, and increased height allowances. Provide additional regulatory incentives and concessions to projects targeted for special needs groups such as exemption from the site plan and design review process.

Complete site remediation form oil extraction activities on sites for affordable or special needs housing.

Interview prospective developers to develop the Walnut Bluff and Orange Bluff sites with the housing affordability components described in the Sites Inventory.

Encourage developers of single-family dwellings to incorporate universal design and/or "visibility" improvements.

Continue to participate in regional efforts to address homelessness, and support additional bridge housing, access centers, and other homeless services offered in the region. Allow the establishment of transitional and supportive housing development, where allowed and consistent with Zoning Code provisions, to support housing opportunities for extremely low-income households. Advertise the Los Angeles County Homeless Outreach Portal (LA-HOP) that allows residents to submit requests for homeless outreach and connect homeless persons with outreach workers. Residents and community members who come across a family with minor children experiencing homelessness can call 211 to connect the family to the Coordinated Entry System for Families. The City will add this information to the City website and post quarterly on the City's social media pages in English and Spanish.

Adopt objective design standards to ensure that the City can provide local guidance on design and standards for by-right projects as allowed by State law. Adoption of objective design standards will facilitate high-quality residential development and compliance with State objectives. The objective design standards will ensure provision of adequate private open space, parking, and related features, as well as architectural design.

Conduct annual proactive outreach with developers to identify opportunities and provides incentives and assist with funding or funding applications.

Establish a centralized, one-stop housing inquiry location to provide information on housing issues and resources including but not limited to all affordable housing citywide, available housing assistance programs, and fair housing/tenant protection information.

**Objective:** Encourage the development of special needs housing.

**Responsible Agency:** Community Development Department.

**Timeline:** Impact fee deferrals current and ongoing; Interview interested developers and select the best qualified private or non-profit developer April to July 2023; Adopt Special Planning area 7 with adjusted developments standards for the Walnut Bluff and Orange Bluff sites by October 2022; Adopt Objective Design Standards December 2023; Site remediation initiated for the Walnut Bluff and Orange Bluff sites when a developer is chosen June 2023; Developer outreach: annually; Participation in regional efforts to address homelessness ongoing throughout the 2021-2029 planning period; add information related to the Los Angeles County Homeless Outreach Portal (LA-HOP) on the City website by December 2022 and post quarterly on the City's social media pages in English and Spanish beginning January 2023. Establish a centralized, one-stop housing inquiry location by 2024.

**Funding Source(s):** General Fund; Waived development impact fees.

**PROGRAM CATEGORY #3:**

**ADDRESS AND REMOVE GOVERNMENTAL AND NONGOVERNMENTAL HOUSING CONSTRAINTS**

Government Code Section 65583(c)(3) states that a housing program must:

*Address and, where appropriate and legally possible, remove governmental and nongovernmental constraints to the maintenance, improvement, and development of housing, including housing for all income levels and housing for persons with disabilities.*

*The program shall remove constraints to, and provide reasonable accommodations for housing designed for, intended for occupancy by, or with supportive services for, persons with disabilities.*

Government Code Section 65583(a)(8) also states the Housing Element must include:

*An analysis of opportunities for energy conservation with respect to residential development. Cities and counties are encouraged to include weatherization and energy efficiency improvements as part of publicly subsidized housing rehabilitation projects. This may include energy efficiency measures that encompass the building envelope, its heating and cooling systems, and its electrical system.*

## Housing Needs Summary

Appendix D contains the analysis of actual and potential governmental constraints.

To address governmental constraints, amendments to the Zoning Ordinance are necessary with respect to definitions, uses permitted in residential zones, and uses permitted in commercial zones. Amendments will be adopted within the first year of the 6th Cycle. It is important to note that Signal Hill has managed to complete construction of and have full occupancy in 100 percent of the 5th Cycle lowest income housing RHNA category sites.

## Goals

- Attain barrier and constraint free governmental codes, ordinances, and policies.
- Provide codes, ordinances, and policies that lead to the improvement of the housing status of residents.
- Achieve energy conservation during the 2021-2029 planning period.

## Policies

- Remove existing governmental constraints to the maintenance, preservation, improvement and development of housing.
- Affirmatively further housing goals through City codes, ordinances and policies that enhance the housing quality of life experienced by residents.
- Educate residents, businesses, visitors and governments to reduce energy use and conserve energy.
- Promote awareness and education about sustainability and energy conservation through the City's Sustainable City Committee which has assisted with the City documenting sustainable practices for energy and water conservation as well as in some 20 other areas of sustainability recognized in the 2019 Beacon awards and the 2021 Gateway Cities Energy and Sustainability awards. Promotional and informative information will also continue to be posted on the City website, social media platforms, newsletters, at the Sustainable City Committee summer concerts series and Night Out for Crime Prevention outreach booths, and other community and regional outreach opportunities.

### **Program 3.1 ADU Ordinance and Incentives**

The preparation and adoption of an accessory dwelling unit (ADU) ordinance is underway. Incentives to lower the cost of ADUs are a function of housing unit size and rental assistance. Consequently, the incentives will include:

- Inform owners that the construction of ADUs is exempt from fees.
- Provide owners with example of small ADUs (micro-units, small studios <500 SF).
- Inform owners of the Section 8 Housing Choice Voucher Program and County of Los Angeles Housing Authority contacts.

In addition, the City will prepare an ADU Design and Development Manual that will be comprised of the following topics:

- How do I get started?

- Basic steps for building an ADU.
- ADU development checklist.
- Site plan examples; Floor plan examples.
- Examples of how to promote affordability.
- Constructing the ADU.
- Financing the ADU.
- Permitting the ADU.
- Additional resources.

Table II-4 shows the development status of ADUs, including square footage and location by zone.

The City will also continue participating in SCAGs ADU Peer Collaboration Team and support the work of Gateway Cities Council of Governments (GCCOG) in their effort for obtaining funding for activities supporting ADU production.

**Objective:** Adopt an ADU Ordinance and plan of incentives for the production of ADUS.

**Responsible Agency:** Community Development Department.

**Timeline:** ADU Ordinance adoption b/y 3rd Quarter (July) 2022; ADU manual: RFP release November 2021, consultant contract by April 2022; ADU Manual (including incentives plan) completion b/y 4th Quarter 2022. Regional participation: currently underway and throughout the planning period.

**Funding Source(s):** General Fund; SB 2 Planning Grant.

**Table II-4: City of Signal Hill ADU Development Status – June 2021**

Year	Address	Development Status	Square Footage	Zoning
2014	2383 ½ Cerritos Avenue	Constructed	1,034	RLM-2
2018	2819 ½ E. 19 <sup>th</sup> Street	Constructed	700	R-L
2018	2060 ½ Raymond Avenue	Under Construction	1,198	RLM-2
2019	2477 ½ Gaviota Avenue	Constructed	1,200	SP-11
2019	3309 ½ Lemon Avenue	Under Review	432	RLM-2
2019	1989 ½ Dawson Avenue	In Plan Check	1,015	RLM-2
2020	2239 ½ Gaviota Avenue	Under Construction	491	RLM-2
2020	1870 ½ Temple Avenue	In Plan Check	1,065	RH
2020	1900 ½ Temple Avenue	Under Review	1,052	R-L
2020	2260 ½ Rose Avenue	Under Construction	291.5	RLM-2
2021	3373 ½ Orange Avenue	In Plan Check	748	RLM-2

### Program 3.2 Density Bonus Ordinance

The density bonus law requires the City to adopt an ordinance that specifies how compliance with Government Code Section 65915 will be implemented. Failure to adopt an ordinance does not relieve a city, county, or city and county from complying with the requirements of Government Code Section 65915.

The City is in the process of updating the Density Bonus Ordinance. To provide for the expeditious processing of a density bonus application, the City circulated a Request for Proposals (RFP) and received multiple responses by November 30, 2021 and is currently interviewing and checking references for accepted consulting firms to prepare an update to the City's Density Bonus Ordinance and intends to

adopt the Ordinance by end of fiscal year 2023. In the meantime, the City follows the State Density Bonus regulations.

**Objective:** Prepare and adopt a density bonus ordinance. Responsible Agency: Community Development Department. Timeline: 4th Quarter 2021.

**Funding Source(s):** SB 2/PLHA/LEAP/Innovation Grant funds or General Fund.

### Program 3.3 Zoning Ordinance Amendments Program

The governmental constraints analysis found that the following Zoning Ordinance amendments are necessary:

- Update Zoning Ordinance Definitions
  - Employee Housing.
  - Qualified Supportive Housing Development.
  - Low Barrier Navigation Center.
    - By way of explanation, a “Low Barrier Navigation Center” is a Housing First, low-barrier, service-enriched shelter focused on moving people into permanent housing that provides temporary living facilities while case managers connect individuals experiencing homelessness to income, public benefits, health services, shelter, and housing. “Low Barrier” means best practices to reduce barriers to entry such as allowing pets; storage of possessions; and privacy. Government Code Section 65560 et. seq. requires that local jurisdictions allow “low barrier navigation centers” by right in areas zoned for mixed use and in non-residential zones permitting multifamily residential uses, if they meet the requirements specified in Government Code Section 65662.
- Update Uses Permitted in the Residential Districts
  - Employee housing in zones permitting single family homes.
  - Large family day care homes in the multifamily districts (SB 234).
- Update Uses Permitted in the Commercial Zones
  - Low barrier navigation centers in the CR Zone.
- Review and Address the following development standards
  - The City will conduct a feasibility assessment of its multifamily parking requirements (including the requirement for covered parking) and height limit of two and a half stories in the RH high-density zone by 2024. Based on the results of the feasibility assessment, the City will amend multifamily residential parking requirements and RH zone height limits in the Zoning Code by 2025.
  - The City will review Zoning Ordinance standards and procedures associated with the approval of residential care facilities (including unlicensed group homes and facilities serving seven or more persons) and revise as appropriate to provide consistent application of standards and ensure that these uses are treated objectively and do not discriminate against persons with disabilities.
  - Emergency shelter parking standards: State law limits required emergency shelter parking to the number of spaces sufficient to accommodate staff working at the shelter. The City currently requires 1 space for each shelter employee and/or volunteer, 1 additional parking space for every 5 beds, and 1 space for each transport van or delivery vehicle. To comply with State law, the City will amend emergency shelter parking standards to limit required

parking to only number of spaces sufficient to accommodate staff working at the shelter. The parking requirements based on beds and for transport vans or delivery vehicles will be removed.

**Objective:** Complete Zoning Ordinance Amendments Program.

**Responsible Agency:** Community Development Department.

**Timeline:** 2022-2023; annual assessment of housing production (starting in 2023), if production is lagging conduct a feasibility assessment by 2024 and if needed amend residential parking requirements and RH zone height limits in the Zoning Code by 2025.

**Funding Source(s):** General Fund.

### **Program 3.4 SB 35 Development Streamlining**

As of July 17, 2020, HCD determined that the City of Signal Hill was subject to SB 35 streamlining for proposed developments with 10 percent or greater affordability. (<https://www.hcd.ca.gov/community-development/accountability-enforcement/docs/sb35determinationsummary10012020.pdf>). To accommodate future SB 35 applications and inquiries, the City will create and make available an informational packet that explains SB 35 streamlining provisions in Signal Hill and provides SB 35 eligibility information.

**Objective:** Create and make available an informational packet that explains SB 35 streamlining provisions and eligibility.

**Responsible Agency:** Community Development Department.

**Timeline:** 1<sup>st</sup> Quarter 2023.

**Funding Source(s):** General Fund.

### **Program 3.5 Energy Conservation**

The governmental constraints analysis found that the following Zoning Ordinance amendments are necessary

The City will take the following actions during the 2021-2029 planning period:

- Encourage energy-efficient design and energy conservation, and help residents minimize energy-related expenses. Maintain and distribute literature on energy conservation, including solar power, additional insulation, and subsidies available from utility companies, and encourage homeowners and landlords to incorporate these features into construction and remodeling projects.
- Continue to promote energy conservation by promoting its Residential Green Building Primer.
- Continue to enforce the 2019 California Green Building Standards Code.
- Use the Sustainable City Committee (SCC) to continue developing and recommending a sustainability framework that promotes environmentally sound and financially practical objectives.
- Continue to implement the goals adopted as part of the Green City Report prepared by the Sustainable City Committee. The Report allows the City to self-certify as a One-Leaf Green City.

The City makes the Primer available at the Community Development Department counter as well as on the City's website. The Primer explains green building construction standards and products make homes more energy efficient by being well insulated and well-sealed. Efficient windows, appliances, lighting and

other household equipment also help add to the savings and lower monthly electricity bills. And with energy prices rising and non-renewable fuels being depleted, an energy efficient home is an asset for years to come. Water bills are also reduced through low-flow equipment and thoughtful land use. The Primer indicates that homes built following green building standards may also qualify for specific "green" financing called an Energy Efficient Mortgage (EEM).

**Objective:** Promote and encourage weatherization and energy efficient home improvements.

**Responsible Agency:** Community Development Department.

**Timeline:** Throughout the planning period; expand website information on energy conservation resources by 1st Quarter 2023.

**Funding Source(s):** General Fund.

#### **PROGRAM CATEGORY #4:**

#### ***CONSERVE AND IMPROVE THE CONDITION OF THE EXISTING STOCK***

Government Code Section 65583(c)(4) states that a housing program shall describe actions to:

*Conserve and improve the condition of the existing affordable housing stock, which may include addressing ways to mitigate the loss of dwelling units demolished by public or private action.*

#### **Housing Needs Summary**

The analysis of the condition of the existing stock involves estimating "substandard" and "dilapidated" housing units. Housing in substandard condition may need minor or moderate repairs or be in need of substantial rehabilitation. Dilapidated condition refers to dwellings suffering from excessive neglect, where the dwelling is not only structurally unsound and maintenance is nonexistent, but also not fit for human habitation in its current condition. Housing in dilapidated condition should be demolished and replaced.

There are an estimated 200 housing units in substandard condition. This estimate is based on prior windshield surveys, code enforcement statistics, and repairs made to the existing housing stock during the past six years.

There are no existing housing units that need to be demolished and replaced because they are in dilapidated condition.

Code enforcement ensures that existing housing units meet the standards of the Municipal Code, the California Housing Code and the Uniform Code for the Abatement of Dangerous Buildings.

#### **Goals**

- Achieve a housing stock free of substandard structures.
- Conserve and improve the existing stock of affordable housing.

#### **Policies**

- Continue to implement the Housing Code Enforcement Program.

- Implement a Housing Rehabilitation Program if funding becomes available

#### **Program 4.1 Housing Code Enforcement**

Code enforcement ensures that properties meet the standards of the Municipal Code. The goal of code enforcement is to encourage proper maintenance of commercial and residential properties.

Code enforcement encourages residents to report possible code violations by making contact via email or a request for service online.

**Objective:** 40 closed code violation cases per year

**Responsible Agency:** Community Development Department.

**Timeline:** The program will be implemented on an ongoing basis during the 2021-2029

**Funding Source(s):** General Fund.

#### **Program 4.2 Housing Rehabilitation**

Housing rehabilitation activities are an important tool for preserving the existing housing stock. The City has previously funded housing rehabilitation activities through the Redevelopment Agency. After the dissolution of all redevelopment agencies in California funding for housing programs has been limited and as a result the City's Housing Rehabilitation program has been dormant. During the 2021-2029 planning period the City will take the following actions:

- Coordinate with the County of Los Angeles Urban County CDBG Program to lobby for an increase in CDBG funding for housing rehabilitation activities.
- Use Permanent Local Housing Allocation (PLHA) program funds for housing rehabilitation activities once 6th cycle Housing Element cleanup activities have been completed.
- Identify and actively support efforts to secure State, federal, and private funding sources as a means of leveraging local funds and maximizing assistance. Identify State, regional, and local public and private housing rehabilitation resources (including nonprofit agencies) that Signal Hill property owners can participate in and provide the information on the City's website.
- Conduct annual outreach and marketing of available State, regional, and local public and private housing rehabilitation resources through workshops, seminars, social media platforms, 1 outreach activity per year; target outreach to homeowners in geographic areas of higher need or lower income as well as local homeowner associations.

**Objective:** 5 single family dwellings.

**Responsible Agency:** Community Development Department.

**Timeline:** Coordination with the County of Los Angeles: annually through the Annual Action Plan process; PLHA application when the State releases Notice of Funding Availability after 2024 when site cleanup has been completed and PLHA funds can be redirected to rehabilitation activities; Website availability of housing rehabilitation resources, by 1st Quarter 2023, Initiate outreach in June 2023 and annually thereafter.

**Funding Source(s):** Potentially CDBG Funds, PLHA funds or other funding sources.

**PROGRAM CATEGORY #5**

**PROMOTE AND AFFIRMATIVELY FURTHER HOUSING OPPORTUNITIES FOR ALL PERSONS**

Section 65583(c)(5) requires that the housing program:

*Promote and affirmatively further fair housing opportunities and promote housing throughout the community or communities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability, and other characteristics protected by the California Fair Employment and Housing Act and any other state and federal fair housing and planning law.*

## Goals

- Attain a housing market with “fair housing choice,” meaning the ability of persons of similar income levels regardless of race, color, religion, sex, marital status, familial status, disability, national origin, ancestry, sexual orientation, source of income or other arbitrary factor to have available to them the same housing choices.

## Policies

- Continue to promote fair housing opportunities through the City’s participation in the County’s Community Development Block Grant Program.
- Promote fair housing through the provision of information and referral services to residents who need help in filing housing discrimination complaints.

### **Program 5.1 – Fair Housing Services and Information Program**

The City will establish and implement a *Fair Housing Information Program*. The information will include, but not be limited, to providing:

- Links to State Department of Fair Employment and Housing; U.S. Department of Housing and Urban Development; and Housing Rights Center website
- Link to Disability Rights, CA
- Posting Reasonable Accommodation Procedure on the Community Development Departments webpage

The Community Development Department will obtain Fair Housing brochure and other information and make it available at the Department’s counter and additional locations including the Signal Hill Library, Signal Hill Chamber of Commerce, and City website.

The City’s Fair Housing Services Program will continue to promote fair housing through its participation in the County’s CDBG Program. The City, in cooperation with the County and the Housing Rights Center (HRC), will continue to make available fair housing services to its residents. HRC has an Eviction Defense Program (EDP) and is part of the Right to Counsel Coalition which is comprised of dozens of legal services organizations and tenant organizing community-based organizations. Through the EDP, legal service providers from the Right to Counsel Coalition offer Countywide free full-scope representation services in unlawful detainer (eviction) cases to low-income renters.

In addition, the City will accomplish the following actions:

- The City will coordinate with the Housing Rights Center to hold three Fair Housing Workshops during the eight-year planning period. Each Fair Housing Workshop will have a theme such as reasonable accommodations, accessibility requirements, right to counsel/eviction prevention

services and target tenants, property managers, or realtors. Post information on accessing fair housing services quarterly on the City's social media pages in English and Spanish beginning January 2023.

- Each year the City will work with the Housing Rights Center to identify services that should be emphasized in the upcoming year.

**Objective:** Implement the Fair Housing Information and Services Program; hold three Fair Housing Workshops during the eight-year planning period; Post information on accessing fair housing services quarterly on the City's social media pages; assist at least 25 residents during the planning period (AFFH viewer shows 12 inquiries from 2013-2021).

**Responsible Agency:** Los Angeles County Development Authority; Housing Rights Center; and Community Development Department.

**Timeline:** Implement the program on an ongoing basis throughout the 2021-2029 planning period; Post information on accessing fair housing services quarterly on the City's social media pages in English and Spanish beginning January 2023.

**Funding Source(s):** County CDBG funds or City General Fund. County CDBG funds pay for the services of the Housing Rights Center.

### **Program 5.2 Affirmatively Furthering Fair Housing**

Appendix B summarizes the fair housing issues and concerns in Signal Hill based on research conducted as part of this Housing Element update. Program 5.2 includes the following summary of the issues, contributing factors, and the City's actions in addressing these issues.

**Objective:** Achieve implementation of Program 5.2.

**Responsible Agency:** Community Development Department.

**Timeline:** Varies by action item, see action items above; adopt a policy that new housing developments must implement an Affirmative Fair Housing Marketing Plan by mid-year 2022.

**Funding Source(s):** SB 2/PLHA/LEAP/Innovation Grant funds and City General Fund.

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<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
<p>34. 1. Disproportionate Need experienced by Hispanic Households.</p> <p><i>Disproportionate housing need related to cost burden and overcrowding is experienced by Hispanic households.</i></p>	<ul style="list-style-type: none"> <li>▪ Location and type of housing (affordable, rental, large units)</li> <li>▪ Inadequate supply/production of affordable housing</li> <li>▪ High cost of land development in the region.</li> <li>▪ Geographic limits to expanding housing development (size of City and oil extraction activities).</li> <li>▪ Displacement of residents due to economic pressures</li> <li>▪ Lack of rental relief programs</li> <li>▪ Limited economic mobility opportunities</li> </ul>	Create new affordable housing that addresses a diversity of lower income housing needs.	<p>1a. Adopt a policy that new housing developments must implement an Affirmative Fair Housing Marketing Plan, a plan that describes specific steps that will be taken by developers to ensure that renters and buyers who are unlikely to apply for housing without special outreach have equal access to housing opportunities available in new housing developments.</p> <p>1b. Adopt Specific Plans for the Orange Bluff and Walnut Bluff Neighborhoods that expand affordable housing opportunities.</p> <p>1c. Identify housing rehabilitation resources for Signal Hill property owners.</p>	<p>1a. Create and adopt the Affirmative Fair Housing Marketing Plan and policy by December 2022. Identify the segments of the eligible population which are least likely to seek housing without special outreach efforts. Identify indicators to be used to measure the success of the marketing program. Advertise and promote City's Affirmative Fair Housing Marketing Plan through the City website, the Diversity Coalition Committee, workshops, seminars, and social media platforms. Target outreach to affordable housing residents, apartment/rental managers, housing assistance service providers, and geographic areas of higher need or lower income; update City website with Affirmative Fair Housing Marketing Plan information by December 2022. Send direct outreach related to Affirmative Fair Housing Marketing Plan to affordable housing residents, apartment/rental managers, and housing assistance service providers by June 2023. Disseminate information at three City meetings, workshops, or seminars annually.</p> <p>1a. (from Program 2.4) Establish a centralized, one-stop housing inquiry location to provide information on housing issues and resources including but not limited to all affordable housing citywide, available housing assistance programs, and fair housing/tenant protection information.</p> <p>1b. (from Program 1.1) Adopt Special Purpose Housing Specific Plan (SP-7) with adjusted developments standards for the Walnut Bluff and</p>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
				<p>Orange Bluff sites by October 2022; Select developers for development of the two affordable RHNAs (Walnut Bluff and Orange Bluff) by December 2022.</p> <p>1c. (from Program 4.2) Conduct annual outreach and marketing of available State, regional, and local public and private housing rehabilitation resources through workshops, seminars, social media platforms (1 outreach activity per year); target outreach to homeowners in geographic areas of higher need or lower income as well as local homeowner associations. Initiate outreach in June 2023 and annually thereafter.</p>
2. Lower environmental quality.  <i>The City of Signal Hill is located near the 405 freeway and over the Long Beach Oil Field and therefore has associated air quality, soils, and oil and gas operations impacts to mitigate prior to development.</i>	<ul style="list-style-type: none"> <li>▪ Location of environmental health hazards and historical development patterns (oil extraction, proximity to major transportation facilities and port)</li> <li>▪ Location and type of affordable housing in the region</li> </ul>	Address environmental health issues	<p>2a. Assist in the transition of land in the City from oil production to housing</p> <p>2b. Adopt a General Plan Environmental Justice Element</p>	<p>2a. (from Program 1.1)</p> <ul style="list-style-type: none"> <li>▪ Rezone the two affordable RHNAs to SP 7 Special Purpose Housing Zoning with adjusted development standards, allowing exclusively residential uses at 35 to 45 dwelling units per acre. The capacity of the Orange Bluff site is 290 housing units (274 will be used to meet the lower income RHNAs and 16 will be used to meet the moderate-income RHNAs). The capacity of the Walnut Bluff site is 90 units, (A minimum of 74 and a maximum of 90 will be used to meet the moderate-income RHNAs) by October 2022.</li> <li>▪ Rezone two sites that will be used to address the above moderate-income RHNAs, Town Center Northwest and Heritage Square with allowable densities of 20 to 35 units per acre and less than 10 units per acre respectively (by October 2022).</li> </ul>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
				<ul style="list-style-type: none"> <li>▪ Issue a Request for Proposal for the two affordable RHNA sites (by April 2023);</li> <li>▪ Interview interested developers and select the best qualified private or non-profit developer for the two affordable RHNA sites (by July 2023);</li> <li>▪ Enter into development agreements to guide development of all four sites as presented in this Housing Element and include a commitment to oil production remediation in the agreements (by December 2023);</li> <li>▪ Conduct a thorough environmental and health assessment for development of housing on sites identified in the Housing Element (by December 2021);</li> <li>▪ Conduct needed oil extraction remediation on properties converting from oil extraction activities to housing once developer is identified by (by December 2023).</li> <li>▪ Ongoing implementation and annual assessment of status of housing sites inventory as part of the annual reporting process.</li> <li>▪ Continue enforcing Chapter 16.24 of the Municipal Code that establishes development standards for properties containing abandoned wells. Require well discovery, leak testing, a well access exhibit, and a well abandonment report for properties with abandoned wells.</li> </ul> <p>2b. Adopt a General Plan Environmental Justice Element that includes objectives and policies to reduce the unique or compounded health risks in disadvantaged and disproportionately affected communities by means that include the reduction of pollution exposure, including the improvement</p>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
				of air quality, and the promotion of public facilities, food access, safe and sanitary homes and physical activity (adopt Element by June 2023).
3. Racial equity/ bias in the City practices and procedures.  <i>In 2020, the City Council approved a draft Race and Equity Framework focuses on racial equity through thoughtful review of City practices and procedures such as budget and finance, employee conduct, ethics, hiring and promotion practices, training, and other policies and standards. While Most respondents indicated a good quality of life, some findings point to differing levels of satisfaction related to inclusivity, bias, and discrimination.</i>	<ul style="list-style-type: none"> <li>▪ Public/Private discrimination</li> <li>▪ Policing and criminalization</li> <li>▪ Lack of accessible forums</li> <li>▪ Lack of private investments in specific neighborhoods</li> <li>▪ Lack of public investments in specific neighborhoods, including services or amenities</li> </ul>	Address systemic racism and bias in the policies and practices of municipal government.	<p>3a. Examine the City's current policies and engage the community on various aspects of race and equity as part of an evolving effort to address systemic racism and bias in the policies and practices of municipal government.</p> <p>3b Adopt a policy that new housing developments must implement an Affirmative Fair Housing Marketing Plan, a plan that describes specific steps that will be taken by developers to ensure that renters and buyers who are unlikely to apply for housing without special outreach have equal access to housing opportunities available in new housing developments.</p>	<p>3a. Implement the City's Race and Equity Framework and continue to convene the Diversity Coalition Committee to examine the City's current policies and engage the community on various aspects of race and equity as part of an evolving effort to address systemic racism and bias in the policies and practices of municipal government. Fund and implement the Diversity Coalition Committee's (DCC) approved projects including outreach at City events, race and equity training for staff, affordable housing, and economic development programs. Implement programs and outreach that target residents and neighborhoods in geographic areas of higher need or lower income. Work with the DCC to establish an inclusive community engagement program. As part of the program establish policies and practices that address identified barriers to participation. (Convene the DDC monthly. Provide an annual update on DDC actions and results. Initiate work on outreach program by June 2023 and adopt a community engagement program by December 2023. Ongoing, with annual updates).</p> <p>3b. Create and adopt the Affirmative Fair Housing Marketing Plan and policy by December 2022. Advertise and promote City's Affirmative Fair Housing Marketing Plan through the City website, the Diversity Coalition Committee, workshops,</p>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
				seminars, and social media platforms. Target outreach to affordable housing residents, apartment/rental managers, housing assistance service providers, and geographic areas of higher need or lower income; update City website with Affirmative Fair Housing Marketing Plan information by December 2022. Disseminate information at three City meetings, workshops, or seminars annually).
4. Displacement Risk  <i>Areas with high demand for housing drive up housing costs resulting in the potential for displacement. Inadequate supply and production of affordable homes available to low-income households and persons in protected classes are major contributing factors to this fair housing issue.</i>	<ul style="list-style-type: none"> <li>▪ Displacement of residents due to economic pressures</li> <li>▪ Inadequate supply/production of affordable housing</li> <li>▪ Rising housing costs in the region</li> <li>▪ High land and development costs in the region</li> </ul>	Increase housing opportunities/provide resources to address rising housing costs and lack of affordable housing	<p>4a. Expand market rate and affordable housing opportunities by adopting Specific Plans for the Orange Bluff and Walnut Bluff Neighborhoods.</p> <p>4b. Incentivize development of affordable housing through impact fee waivers and favorable development standards as part of the Specific Plan process, density bonus use, and ADU development.</p> <p>4c. Adopt a policy that new housing developments must implement an Affirmative Fair Housing Marketing Plan, a plan that describes specific steps that will be taken by developers to ensure that renters and buyers who are unlikely to apply for housing without special outreach have equal access to housing opportunities available in new housing developments.</p> <p>4d. Advertise regional housing assistance programs to Signal Hill residents (Housing Choice Voucher, emergency rent relief program, etc.)</p> <p>4e. Preserve existing housing by addressing housing conditions issues, bringing substandard housing units into compliance with City building and zoning codes.</p>	<p>4a. (from Program 1.1)</p> <ul style="list-style-type: none"> <li>▪ Rezone the two affordable RHNA sites to SP 7 Special Purpose Housing Zoning with adjusted developments standards, allowing exclusively residential uses at 35 to 45 dwelling units per acre. The capacity of the Orange Bluff site is 290 housing units (274 will be used to meet the lower income RHNA and 16 will be used to meet the moderate-income RHNA). The capacity of the Walnut Bluff site is 90 units, (A minimum of 74 and a maximum of 90 will be used to meet the moderate income RHNA) by October 2022.</li> <li>▪ Issue a Request for Proposal for the two affordable RHNA sites (by April 2023);</li> <li>▪ Interview interested developers and select the best qualified private or non-profit developer for the two affordable RHNA sites (by July 2023);</li> <li>▪ Enter into development agreements to guide development of all four sites as presented in this Housing Element and include a commitment to oil production remediation in the agreements (by December 2023);</li> </ul>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
			<p>4f. The Housing Rights Center will provide tenant and eviction protection assistance and the City will publicize available HRC services to residents.</p> <p>4g. Support regional efforts to develop affordable housing and address homelessness and address local constraints to the development of supportive and emergency housing.</p> <p>4h. Provide support for local, small businesses.</p>	<ul style="list-style-type: none"> <li>▪ Conduct a thorough environmental and health assessment for development of housing on sites identified in the Housing Element (by December 2021);</li> <li>▪ Conduct needed oil extraction remediation on properties converting from oil extraction activities to housing once developer is identified by (by December 2023).</li> <li>▪ Ongoing implementation and annual assessment of status of housing sites inventory as part of the annual reporting process.</li> </ul> <p>4b. Incentivize development of affordable housing through:</p> <ul style="list-style-type: none"> <li>▪ (From Programs 2.3 and 2.4) Exempting new affordable housing developments from impact fees for parks, water and traffic and providing favorable development standards as part of the Specific Plan process; provide fee waivers for two projects within the planning period. (impact fee deferrals; current and ongoing; adopt Special Planning Area 7 with adjusted developments standards for the Walnut Bluff and Orange Bluff sites by October 2022).</li> <li>▪ (from Program 3.1) Facilitate and expand opportunities for ADU development by adopting an ADU Ordinance by 3rd Quarter (July) 2022; creating an ADU manual: RFP release November 2021, consultant contract by April 2022; ADU Manual (including incentives plan) completion by 4th Quarter 2022).</li> <li>▪ (from Program 3.1) Facilitate and expand opportunities for ADU development by</li> </ul>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
			<ul style="list-style-type: none"> <li>adopting an ADU Ordinance b/y 3rd Quarter (July) 2022; creating an ADU manual: RFP release November 2021, consultant contract by April 2022; ADU Manual (including incentives plan) completion b/y 4th Quarter 2022).</li> <li>▪ (from Program 3.2)The City is in the process of updating the Density Bonus Ordinance. To provide for the expeditious processing of a density bonus application, the City circulated a Request for Proposals (RFP) and received multiple responses by November 30, 2021 and is currently interviewing and checking references for accepted consulting firms to prepare an update to the City's Density Bonus Ordinance and intends to adopt the Ordinance by end of fiscal year 2023. In the meantime, the City follows the State Density Bonus regulations.</li> </ul> <p>4c. Create and adopt the Affirmative Fair Housing Marketing Plan and policy by December 2022. Advertise and promote City's Affirmative Fair Housing Marketing Plan through the City website, the Diversity Coalition Committee, workshops, seminars, and social media platforms. Target outreach to affordable housing residents, apartment/rental managers, housing assistance service providers, and geographic areas of higher need or lower incomes; update City website with Affirmative Fair Housing Marketing Plan information by December 2022. Disseminate information at three City meetings, workshops, or seminars annually).</p>	

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
				<p>4d. (from Program 2.1) Have quarterly contact with the County Housing Departments and groups for promotion of programs and assistance (the City of Signal Hill does not fund or operate these programs); update the City website with regional housing assistance programs information by December 2022. By June 2023, send direct outreach related to the Housing Choice Voucher Program to affordable housing residents in geographic areas of higher need or lower-income and to rental/property managers and housing assistance service providers in higher opportunity areas.</p> <p>4d. (From Program 2.4) Establish a centralized, one-stop housing inquiry location to provide information on housing issues and resources including but not limited to all affordable housing citywide, available housing assistance programs, homeless resources, and fair housing/tenant protection information. Establish one-stop location by 2024.</p> <p>4e (from Program 4.1) Continue to implement the code enforcement program to inspect and bring housing units into compliance with the Municipal Code. Attain 40 closed code violation cases per year.</p> <p>4f (from Program 5.1) The City's Fair Housing Services Program will continue to promote fair housing through its participation in the County's CDBG Program. The City, in cooperation with the County and the</p>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
				<p>Housing Rights Center (HRC), will continue to make available fair housing services to its residents. HRC has an Eviction Defense Program (EDP) and is part of the Right to Counsel Coalition which is comprised of dozens of legal services organizations and tenant organizing community-based organizations. Through the EDP, legal service providers from the Right to Counsel Coalition offer Countywide free full-scope representation services in unlawful detainer (eviction) cases to low-income renters. The City will coordinate with HRC to hold three (3) Fair Housing Workshops during the planning period and cover themes related to resident displacement such as reasonable accommodations, accessibility requirements, right to counsel/eviction prevention services. Assist at least 25 residents during the planning period.</p> <p>4g Establish a centralized, one-stop housing inquiry location to provide information on housing issues and resources including but not limited to all affordable housing citywide, available housing assistance programs, homeless resources, and fair housing/tenant protection information.</p> <p>(from Program 2.4) Participate in regional efforts to address homelessness ongoing throughout the 2021-2029 planning period; assist people experiencing homelessness and provide residents resources to assist others by adding information submitting outreach requests through Los Angeles County</p>

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
			<p>Homeless Outreach Portal (LA-HOP) on the City website by December 2022 and post quarterly on the City's social media pages in English and Spanish beginning January 2023.</p> <p>4g (from Program 3.3)</p> <p>Provide local homeless housing opportunities by amending the Zoning Ordinance and other pertinent documents such as Specific Plans to make any necessary changes to ensure compliance with the AB 2162 (Supportive Housing Streamlining Act) and AB 101 (Low-Barrier Navigation Centers). Amend emergency shelter parking standards to comply with state law. Complete Zoning Ordinance Amendments by December 2023.</p> <p>4h. Continue the Spotlight on Small Business program that offers business owners an opportunity to present their products and/or services and be featured on the City's social media and newsletters. Present 6 local businesses per year.</p> <p>Provide 2 COVID-19 Microbusiness Recovery Grants per year. By December 2023, establish a façade and sign improvement grant for small local businesses. Provide 2 grants per year.</p> <p>Refer small businesses to the Small Business Development Center at Long Beach City College which offers free services to Signal Hill businesses. The SBDC is funded by the Federal Government. Conduct 1 presentation by the Executive Director at the Long Beach SBDC at a City Council meetings per year. Advertise the Small Business</p>	

## 2021-2029 Housing Element

<b>Program 5.2 Affirmatively Furthering Fair Housing</b>				
<b>Fair Housing Issues (in order of priority)</b>	<b>Contributing Factors</b>	<b>Goals</b>	<b>Meaningful Actions</b>	<b>Targets and Timeframe</b>
				<p>Development Center through the City's newsletters, website, and social media two times per year.</p> <p>Encourage local businesses to participate in the Request for Proposals (RFP) by adding a page dedicated to small business and participation in the City's RFP process. Create and add an informational video about responding to RFPs. Conduct 1 yearly presentation to the Chamber of Commerce.</p>

## QUANTIFIED OBJECTIVES

According to HCD's Building Blocks: A Comprehensive Housing Element Guide:

The quantified objectives should estimate the number of units likely to be constructed, rehabilitated, or conserved/preserved by income level during the planning period. The quantified objectives do not represent a ceiling on development, but rather set a target goal for the jurisdiction to achieve, based on needs, resources, and constraints.

Ideally, construction objectives will be equal to identified needs. However, when a locality has determined total housing needs exceed the locality's ability to meet those needs with existing resources, the quantified objectives may be less than the total identified need as specified in the locality's regional housing need allocation. Under these circumstances, localities may target limited resources to areas of greatest need (based on the analysis completed). The housing element, however, must describe the analysis used to establish the quantified objectives.

- The “New Construction” objective refers to the City’s *remaining* RHNA 2021-2029 RHNA of 509 units once approved projects are subtracted.
- The “Rehabilitation” objective refers to the number of existing units expected to be rehabilitated during the planning period.
- The “Conservation/Preservation” objective refers to the preservation of the existing affordable housing stock throughout the planning period. To determine the number of units to be conserved, a locality could, for example, quantify the number of existing housing units that will be preserved through the provision of more stable zoning for mobile home parks or other affordable housing types.

**Table II-5: Quantified Objectives: 2021-2029**

Category	Extremely Low	Very Low	Low	Moderate	Above Moderate	Total
Construction	80	81	78	90	180	509
Rehabilitation	1	2	2	0	0	5
Conservation/ Preservation	25	15	10	0	0	50

Notes:

Rehabilitation: The 5-unit objective for lower income households assumes that funding to support a housing rehabilitation program will become available during the 8-year planning period.

Conservation/Preservation: The objective is based on the estimated number of lower income households that will receive Section 8 rental assistance. On average, approximately 50 households are assisted per year by the Housing Authority of the County of Los Angeles.

**APPENDIX A  
ASSESSMENT OF HOUSING NEEDS**

# APPENDIX A

## ASSESSMENT OF HOUSING NEEDS

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**A note about the American Community Survey (ACS) Data:** Single-year and multiyear estimates from the ACS are all “period” estimates derived from a sample collected over a period of time, as opposed to “point-in-time” estimates such as those from past decennial censuses.

In the case of ACS multiyear estimates, the period is 5 calendar years (e.g., the 2015–2019 ACS estimates cover the period from January 2015 through December 2019).

Multiyear estimates are labeled to indicate clearly the full period of time (e.g., “The child poverty rate in 2015–2019 was X percent.”). They do not describe any specific day, month, or year within that time period.

For data users interested in obtaining detailed ACS data for small geographic areas (areas with fewer than 65,000 residents), ACS 5-year estimates are the only option.

Data for individual census tracts is available only from the ACS 5-year estimates.

Source: U.S. Census Bureau, Understanding and Using American Community Survey Data, pages 13-16

**A note about COVID-19:** The ACS 2015-2019 estimates are the source for many of the tables and data presented and discussed in Appendix A. The ACS data does not reflect the impacts of COVID 19 and, therefore, may not portray accurately the 2021 conditions in Signal Hill. Indeed, the tables and data describe the conditions that existed over a 5-year period, a period that ended in December 2019 which was three months before the March 2020 lockdown caused by the spread of COVID-19.

The COVID-19 pandemic caused job losses and associated income losses as well as an increase in homelessness. Persons employed in the food industry would experience disproportionately adverse economic impacts compared to those working in software development or who are able to work remotely at home.

A recent economic report explained that -

The majority of pandemic-related job losses were low-skill, low-wage positions that impacted the region’s at-risk communities the most.

Lower-income Southern California residents already faced significant challenges before the pandemic, resulting in continued housing affordability concerns, domestic outmigration, and an overall reduction in quality-of-life. The pandemic has clearly exacerbated these issues. While federal stimulus may have supported these communities during the initial months of the pandemic, it has since diminished, further complicating the financial picture for many families throughout the region. While lower-wage positions are often overlooked,

they are crucial to “essential” businesses and to the explosive growth in gross domestic product (GDP) experienced in Q3 2020.

Lower-wage segments at the national, state, and SCAG regional level have all felt significantly more employment losses than middle- or high-wage segments.

Source: Southern California Association of Governments, Regional Briefing Book, pages 6 and 9

Many of the characteristics discussed in the assessment of housing needs have not changed because of the pandemic. The existing housing stock and its physical condition remain unchanged. The number of vacant housing units, however, may have increased above the levels reported as of January 1, 2020. Certain household characteristics such as the elderly, persons with disabilities, and large families have not changed due to the pandemic. The population and employment projections remain the same.

However, because of the lockdown and stay-at-home orders, many businesses have had to close temporarily and some even permanently. This has created job losses and associated income losses. Therefore, the number of lower income households probably has increased above the number reported in this housing needs assessment.

The number of cost burdened households – those spending 30% or more of their income on housing costs - also may have increased because of a loss of income, or no income at all. But some owners and renters may have skipped making their housing payments which would have dampened any increase in housing cost burdens.

Overcrowding may have increased as some families pooled their resources by moving into the same home. On the other hand, some doubled-up households may have moved from the city in search of lower cost housing in the inland counties.

Finally, homelessness probably will increase in the next few years. The Pandemic Recession is projected to cause roughly twice as much homelessness as the 2008 Great Recession.

Source: Economic Roundtable, Locked Out: Unemployment and Homelessness in the Covid Economy, January 2021, page 3

## INTRODUCTION

Chart A-1 lists the components of the assessment of housing needs.

**Chart A-1: Components of the Assessment of Housing Needs**

<ul style="list-style-type: none"> <li>▪ <b>Housing Stock Characteristics</b> <ul style="list-style-type: none"> <li>○ Number and Types of Housing</li> <li>○ Vacant Housing Units</li> <li>○ Condition of the Existing Housing Stock</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Household Characteristics</b> <ul style="list-style-type: none"> <li>○ Tenure</li> <li>○ Household Income Groups</li> <li>○ Level of Payment Compared with Ability to Pay</li> <li>○ Overcrowding</li> <li>○ Race and Ethnicity</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Affordable Housing At-Risk of Conversion to Market Rate Housing</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Special Housing Needs</b> <ul style="list-style-type: none"> <li>○ Elderly</li> <li>○ Persons with Disabilities</li> <li>○ Persons with Developmental Disabilities</li> <li>○ Large Families</li> <li>○ Farmworkers</li> <li>○ Families with Female Heads of Household</li> <li>○ Families and Persons in Need of Emergency Shelter</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Projected Housing Needs</b> <ul style="list-style-type: none"> <li>○ Population Trends and Projections</li> <li>○ Employment Trends and Projections</li> <li>○ Share of the Regional Housing Need</li> </ul> </li> </ul>

## HOUSING CHARACTERISTICS

Part B includes information on –

- Number and types of housing units
- Vacant housing units
- Condition of the existing housing stock
- Current and Estimated Housing Cost

### Existing Housing Stock

Signal Hill's housing stock has fewer than 5,000 housing units. In part, the size of the housing stock is small because the area of the City is only 2.2 square miles. The addition of new housing to accommodate the City's share of the regional housing need and to meet market demand could increase the housing stock by almost 20%.

As of January 1, 2021, Signal Hill's housing stock is comprised of 4,632 housing units. Table A-1 shows that approximately three out of every 10 housing units are single-family detached homes. Multifamily buildings of 5 or more units represent the largest segment of the housing stock as they comprise about four out of

every 10 housing units. It is important to note that Signal Hill has managed to complete construction of and have full occupancy in 100% of the 5th Cycle lowest income housing RHNA category.

**Table A-1: City of Signal Hill Housing Stock by Type of Unit January 1, 2021**

Type of Unit	Number of Units	Percent
1 unit, detached	1,448	31.3%
1 unit, attached	620	13.4%
2 to 4 units	640	13.8%
5+ units	1,924	41.5%
Mobile homes	0	0.0%
Total Housing Units	4,632	100.0%

Source: California Department of Finance, Demographic Research Unit, Population and Housing Estimates for Cities, Counties and the State, January 1, 2021

## Vacant Housing Units

The California Department of Finance (DOF) estimates that 231 of the 4,631 housing units are vacant. The vacant housing units represent a 4% vacancy rate. Based on American Community Survey (ACS) data, it can be estimated that of the 231 vacant units – 36 are rental units; 56 are for sale/sold units; and 139 are “other vacant”.

“Other vacant units” refers to housing units held for occupancy by a caretaker or janitor, and units held for personal reasons of the owner. There is no local knowledge which provides insights as to why “other vacant units” comprise 60% of all vacant units.

The “effective” rental vacancy is lower than 4% because the “other vacant units” are unavailable to buy or rent.

## Condition of the Existing Housing Stock

The analysis of the condition of the existing stock involves estimating “substandard” housing units and housing units that should be replaced. Housing in substandard condition may need minor or moderate repairs or be in need of substantial rehabilitation. Dilapidated condition refers to dwellings suffering from excessive neglect, where the dwelling is not only structurally unsound and maintenance is nonexistent but also not fit for human habitation in its current condition. Housing in dilapidated condition should be demolished and replaced.

Conditions such as inadequate sanitation, deficient plumbing, and faulting weather protection are examples of substandard housing.

The 4<sup>th</sup> Cycle and 5<sup>th</sup> Housing Elements estimated 300 and 200 housing units in substandard housing condition, respectively.

Housing lacking complete kitchen or plumbing facilities provide a basis for estimating the number of substandard housing units. According to the 2015-2019 American Community Survey, the City has 113 housing units lacking complete kitchen facilities and 12 dwellings lacking complete plumbing facilities.

A unit has complete kitchen facilities, according to the ACS, when it has all three of the following facilities: a sink with a faucet, a stove or range, and a refrigerator. A housing unit having only a microwave or portable heating equipment such as a hot plate or camping stove should not be considered as having complete kitchen facilities. An icebox is not considered to be a refrigerator.

Complete plumbing facilities include: hot and cold running water and a bathtub or shower. Both facilities must be located inside the house, apartment, or mobile home, but not necessarily in the same room. Housing units are classified as lacking complete plumbing facilities when either of the two facilities is not present.

The number of substandard housing units falls within the range of 113 to 200.

There are no existing housing units that need to be demolished and replaced because they are in dilapidated condition.

Code enforcement ensures that existing housing units meet the standards of the Municipal Code, the California Housing Code and the Uniform Code for the Abatement of Dangerous Buildings.

## HOUSEHOLD CHARACTERISTICS

Part C provides information on the following household characteristics:

- Tenure
- Household income groups
- Level of payment compared to ability to pay
- Overcrowding
- Race and ethnicity

### Tenure – Owners and Renters

Tenure refers to owner and renter occupancy of housing units. A household consists of the persons occupying a housing unit. The number of occupied housing units and households is the same.

In Signal Hill, owner and renter households occupy 52.3% and 47.7% respectively of all housing units. Approximately one-half of all owners occupy single family detached homes (1,253/2,470). Renters predominantly occupy single-family detached homes, triplexes/4plexes, and multi-family buildings comprised of 10 or more units. Refer to Table A-2 for a detailed breakdown of the tenure data.

**Table A-2: Tenure by Units in Structure: 2015 – 2019**

Units in Structure	Owner Occupied	Percent of Occupied	Renter Occupied	Percent of Occupied	Total Occupied
1, detached	1,253	50.7%	505	22.6%	1,758
1, attached	437	17.7%	265	11.9%	702

**Table A-2: Tenure by Units in Structure: 2015 – 2019**

<b>Units in Structure</b>	<b>Owner Occupied</b>	<b>Percent of Occupied</b>	<b>Renter Occupied</b>	<b>Percent of Occupied</b>	<b>Total Occupied</b>
2	15	0.6%	227	10.2%	242
3 or 4	0	0.0%	347	15.5%	347
5 to 9	41	1.7%	282	12.6%	323
10 or more	724	29.3%	608	27.2%	1,332
<b>Total</b>	<b>2,470</b>	<b>100.0%</b>	<b>2,234</b>	<b>100.0%</b>	<b>4,704</b>
<b>Percent</b>	<b>52.5%</b>	<b>100.0%</b>	<b>47.5%</b>	<b>100.0%</b>	<b>4,704</b>

Source: 2015-2019 American Community Survey 5-Year Estimates, Table S2504, Physical Characteristics for Occupied Housing Units

Note: ACS estimates 15 mobile homes; however, DOF has none (see Table A-1)

## Household Income Groups

### Definitions of Household Income Groups

Household income groups are defined in terms of the percentages of Los Angeles County's median household income:

- Extremely low 0-30%
- Very low 30-50%
- Low 50-80%
- Moderate 80-120%
- Above Moderate 120%+

Table A-3 shows that the income limits are adjusted by household size; for example, a 6-person low-income household (\$104,550) has a higher income than a 4-person low income household (\$90,100).

### Number of Households by Income Group

Table A-4 estimates the number of owners and renters in five income groups. At 48.4%+, the above moderate-income households comprise the large income group. Lower income households comprise 42.6% of all households. "Lower" income includes the three groups with incomes less than 80% of the area median income. The number of lower income renter households (1,420) is approximately three times the number of lower income owners (445).

It should be noted that Table 2 and Table 4 report different numbers of owners and renters. It is not known why different numbers are reported, although Table 2 covers a period from 2015 to 2019 while Table 4 covers the 2013-2017 period.

**Table A-3: Los Angeles County 2021 Annual Household Income Limits Adjusted by Household Size**

Household Size (# of Persons)	Extremely Low Income	Very Low Income	Low Income	Moderate Income
1 person	\$24,850	\$41,400	\$66,250	\$67,200
2 persons	\$28,400	\$47,300	\$75,700	\$76,800
3 persons	\$31,950	\$53,200	\$85,150	\$86,400
4 persons	\$35,450	\$59,100	\$94,600	\$96,000
5 persons	\$38,300	\$63,850	\$102,200	\$103,700
6 persons	\$41,150	\$68,600	\$109,750	\$111,350
7 persons	\$44,000	\$73,300	\$117,350	\$119,050
8 persons	\$46,800	\$78,050	\$124,900	\$126,700

Source: California Department of Housing and Community Development, State Income Limits for 2020, April 26, 2021

**Table A-4: Annual Household Income Distribution by Tenure: 2013-2017**

Income Group (% of area median income)	Owner Households	Renter Households	Total Households	Percent Distribution
Extremely Low 0-30%	155	450	605	13.8%
Very Low 30-50%	100	570	670	15.3%
Low 50-80%	190	400	590	13.5%
Moderate 80-100%	175	220	395	9.0%
Above Moderate >100%	1,425	695	2,120	48.4%
Total	2,040	2,330	4,370	100.0%

Source: Comprehensive Housing Affordability Strategy (CHAS) Data, 2013-2017 American Community Survey

### Extremely Low-Income Households

Extremely low-income (ELI) is defined as households with income of 30 percent or less of area median income. An estimate of the number of ELI households is provided in Table A-4: Annual Household Income Distribution by Tenure: 2013-2017. Using Comprehensive Housing Affordability Strategy (CHAS) data Table A-4 shows that 13.8% of the City's total households (605 households) were classified as extremely low income (0-30 percent of AMI). Households with extremely low-income have a variety of housing situations and needs. For example, most families and individuals receiving public assistance, such as social security insurance (SSI) or disability insurance are considered extremely low-income households.

To calculate the projected housing needs, the City assumed 50 percent of its very low-income regional housing need are extremely low-income households. As a result, from the very low-income need of 161 units, the City has a projected need of 80 units for extremely low-income households. Many extremely low-income households will be seeking rental housing and most likely facing an overpayment, overcrowding or substandard housing condition. Data from the 2013-2017 Comprehensive Housing Affordability Strategy (CHAS) Data set (based on the American Community Survey) shows that while 41.8% of households overpay for housing in Signal Hill, the situation is more dire for extremely low-income households as 83.9 percent of these households overpay for housing. CHAS data also includes housing problems by income level and in Signal Hill extremely low-income households are overrepresented among households experiencing housing problems. While extremely low-income households make up 13.8% of all

Signal Hill households, they make up 25.6% of households experiencing one of four housing problems (incomplete kitchen facilities, incomplete plumbing facilities, more than 1 person per room, or cost burden greater than 30%).

Some extremely low-income households could be with mental or other disabilities and special needs. To address the range of needs, the City will employ a detailed housing strategy including changing the City's land use policy to include Low-Barrier Navigation Centers as a by right use in areas zoned for mixed-use and non-residential zones permitting multifamily uses, pursuant to AB 101. State law requires cities to allow transitional and supportive housing as a residential use and allowed by right in all zones that allow similar residential uses. The City will also expand housing opportunities to meet the needs of special needs residents—including seniors, residents with disabilities and developmental disabilities, large families, extremely low-income households, and those experiencing homelessness—by providing Section 8 rental assistance to extremely low-, very low, and low-income households through the programs administered by the Housing Authority of the County of Los Angeles, facilitating the construction of new housing affordable to lower income households, waiving certain fees for affordable housing developments, and by ensuring the affordability of new affordable housing developments through long-term affordability covenants.

## Level of Payment Compared to Ability to Pay

Level of payment compared to ability to pay is measured by housing costs as a percentage of household income. For renters, housing cost is gross rent (contract rent plus utilities). For owners, housing cost is "selected monthly owner costs", which includes mortgage payment, utilities, association fees, insurance, and real estate taxes.

For lower income households, housing costs exceed ability to pay when 30% or more of their income is expended on housing costs. These households are referred to as "overpaying" or "cost burdened." "Severe" cost burden occurs when lower income households spend 50% or more of their income on housing costs.

### Cost Burdened Renter Households

Table A-5 shows that 1,295 (735 + 560) renter households are cost burdened. In fact, 56% of all renter households are cost burdened (1,295/2,330).

Of the 1,295 cost burdened renters, 57% are cost burdened and 43% are severely cost burdened, respectively. These severely cost burdened renter households are spending more than one-half of their paychecks on housing costs. The extremely low income renters who are severely cost burdened face serious economic hardships.

The County of Los Angeles Housing Authority administers a rental assistance program called the Section 8 Housing Choice Voucher Program. The program assists extremely low and very low income cost burdened renters to make their rental payments. As of January 2021, 53 Signal Hill households are receiving Section 8 rental housing assistance.

**Table A-5: Number and Percentage of Cost Burdened Renters by Income Group: 2013-2017**

Household Income Group	Cost Burden 30-50%	% of All Cost Burden	Severe Cost Burden 50%+	% of All Severe Cost Burden
Extremely Low <30%	10	1.4%	415	74.1%
Very Low 30-50%	380	51.7%	115	20.5%
Low 50-80%	205	27.9%	30	5.4%
Moderate 80-100%	100	13.6%	0	0.0%
Above Moderate >100%	40	5.4%	0	0.0%
<b>Total</b>	<b>735</b>	<b>100.0%</b>	<b>560</b>	<b>100.0%</b>

Source: Comprehensive Housing Affordability Strategy (CHAS) Data, 2013-2017 American Community Survey

### Cost Burdened Owner Households

Table A-6 shows that 525 (325 + 200) owner households are cost burdened a number that represents 26% of all owner households. Of the 525 cost burdened owners, 38% are severely cost burdened, meaning that more than one-half of their income is expended on housing costs.

No programs are available to ease the hardships that cost burdened owners experience. It may be possible for some owners to take advantage of historically low interest rates and refinance their loans in order to reduce their monthly payments.

**Table A-6: Number and Percentage of Cost Burdened Owners by Income Group: 2013-2017**

Household Income Group	Cost Burden 30-50%	% of All Cost Burden	Severe Cost Burden 50%+	% of All Severe Cost Burden
Extremely Low <30%	20	6.2%	75	37.5%
Very Low 30-50%	15	4.6%	25	12.5%
Low 50-80%	25	7.7%	60	30.0%
Moderate 80-100%	55	16.9%	20	10.0%
Above Moderate >100%	210	64.6%	20	10.0%
<b>Total</b>	<b>325</b>	<b>100.0%</b>	<b>200</b>	<b>100.0%</b>

Source: Comprehensive Housing Affordability Strategy (CHAS) Data, 2013-2017 American Community Survey

In summary, housing cost burden is the most significant problem confronting lower income renter households. A few housing cost burdened renters can be assisted by the County's Section 8 rental assistance program. For those who are not receiving rental assistance, housing cost burdens cause economic hardships because after making their monthly housing payments so little income remains to meet other needs such as food, utilities, transportation, health insurance and child care.

The incomes of cost burdened renters would need to dramatically increase in order for them to have a housing payment that would not consume more than 30% of their household budgets.

## Overcrowding

The ACS does not define an overcrowded housing unit or household. The ACS does publish data on the ratio of the number of persons occupying a housing unit to the number of rooms in the dwelling. These data are often used as an *indicator* of overcrowded households. There are, however, several other indicators of overcrowded households such as persons per bedroom, square footage per person, and Uniform Building Code occupancy standards.

Government Code Section 65584.01(b)(1) defines overcrowding as one person per room in a dwelling.

The accuracy of the ACS “persons per room” data merits evaluation, however. For example, the meaning of “rooms” merits scrutiny. ACS Housing question 6a reads:

How many separate rooms are in this house, apartment, or mobile home? *Rooms must be separated by built-in archways or walls that extend out at least 6 inches and go from floor to ceiling.*

- INCLUDE bedrooms, kitchens, etc.
- EXCLUDE bathrooms, porches, balconies, foyers, or unfinished basements.

**Note:** HCD guidance excludes kitchens from the room count but the ACS questionnaire does not. The ACS subject definition also includes kitchens in the room count.

**Note:** Rooms per the ACS questionnaire and subject definition must be separated by walls.

Given the vagueness of the ACS question, it is possible that respondents to the survey could have overstated or understated the number of rooms in their housing unit.

Table A-7 reveals that only 34 owner occupied housing are overcrowded. In contrast, 248 renters or 9.5% of all renters are crowded based on the 1.01 or more persons per room standard.

**Table A-7: Persons per Room by Tenure: 2015-2019**

Persons Per Room	Owner Occupied	Percent	Renter Occupied	Percent	Total Households	Percent
Less than 1.00	2,436	98.6%	2,035	90.5%	4,471	94.8%
1.01 to 1.50	34	1.4%	142	6.3%	176	3.7%
1.51 to 2.0	0	0.0%	29	1.3%	29	0.6%
2.01 or more	0	0.0%	43	1.9%	43	0.9%
<b>Total</b>	<b>2,470</b>	<b>100.0%</b>	<b>2,249</b>	<b>100.0%</b>	<b>4,719</b>	<b>100.0%</b>

Source: 2015-2019 American Community Survey 5-Year Estimates, Table B25014 Tenure by Occupants Per Room

Although the Government Code references the 1.01+ persons per room standard, many demographers, housing economists, and fair housing experts are troubled by this standard.

Demographers have offered the following evaluation of the 1.01 persons per room ratio:

Persons per room has been used as the primary indicator for measuring overcrowding. In this calculation, all persons (adults and children of both sexes) are counted equally, as are all rooms. The room count does not include bathrooms, hallways, closets, and porches.

To measure overcrowding, we combine two variables to form the ratio of the number of persons in the household to the number of rooms reported in the housing unit. This ratio is trichotomized to reflect key policy thresholds: one person or fewer per room, 1.01 to 1.50 persons per room, and more than 1.50 persons per room. ...*the highest of the three categories measures severe overcrowding and is proposed as a less culturally restrictive assessment of behavior that constitutes a 'problem'.* [Emphasis added]

Dowell Myers and Seong Woo Lee, *Immigration Cohorts and Residential Overcrowding in Southern California*, Demography, Volume 33-Number 1, February 1996, pages 52 and 55

Very few owners are crowded. To eliminate crowded conditions, they could add a bedroom or construct an ADU. Renters, on the other hand, are constrained in adapting their housing unit to meet space needs. Fewer people would need to live in the rental unit, or they could move to a housing unit with more space.

## Race and Ethnicity

*In order to avoid duplication of data and analysis, Appendix B – Assessment of Fair Housing – discusses race and ethnicity.*

## AT RISK HOUSING

According to HCD:

For the purpose of housing-element law, assisted housing developments (or at-risk units) are defined as multifamily, rental housing complexes that receive government assistance under any of the federal, state, and/or local programs or any combination of rental assistance, mortgage insurance, interest reductions, and/or direct loan programs and are eligible to convert to market-rate units due to termination (opt-out) of a rent subsidy contract, mortgage prepayment, or other expiring use restrictions within 10 years of the beginning of the housing-element planning period.

Table A-8 shows that the California Housing Partnership has assigned a “Low Risk” of conversion to market rate housing to Signal Hill’s four affordable housing developments. This risk level means that the affordability restrictions extend beyond 10 years, or the development is owned by a large/stable non-profit, mission-driven developer.

**Table A-8: Conversion Risk Assessment of Affordable Rental Housing Developments: 2020**

Assisted Housing Development	Low Income Units	Affordability End Date	Risk
Las Brisas Community Housing	90	2057	Low
Las Brisas II	59	2061	Low
Zinnia Apartments (Gundry Hill)	71	2069	Low
Eucalyptus Apartment/Sea Breeze Manor	24	2036	Low

Source: Southern California Association of Governments, Final RHNA Methodology Data Appendix, California Housing Partnership, Affordable Housing Units At-Risk – Los Angeles County

## SPECIAL HOUSING NEEDS

Government Code Section 65583(a)(7)) requires an analysis of any special housing needs experienced by:

- Elderly persons
- Persons with disabilities
- Persons with developmentally disabled as defined in Section 4512 of the Welfare and Institutions Code
- Large families
- Farmworkers
- Families with female heads of households
- Families and persons in need of emergency shelter

### Elderly

#### Population and Household Characteristics

The ACS estimates that 1,940 elderly persons make Signal Hill their home, a number that represents 17% of the City's total population. Elderly women outnumber elderly men by a ratio of 1.6:1 (1,185/755). Almost 12% of the elderly are in the "older" age cohort of 80 years of age or older.

**Table A-9: Elderly Population by Age Group and Sex: 2015-2019**

Age Group	Male	Female	Total	Percent
62-64	173	281	454	23.4%
65-66	84	136	220	11.3%
67-69	94	232	326	16.8%
70-74	202	248	450	23.2%
75-79	122	144	266	13.7%
80-84	39	54	93	4.8%
85+	41	90	131	6.8%
Total	755	1,185	1,940	100.0%

Source: 2015-2019 American Community Survey, Table B01001, Sex by Age

The ACS estimates that 1,173 elderly households live in Signal Hill. The average household size is 1.65 persons per household (1,940/1,173). Almost one-half of the elderly households are in the 65-74 age

group. In terms of tenure, almost three of every four elderly householders are homeowners. Refer to Table A-10 below for the household data.

**Table A-10: Elderly Households by Tenure: 2015-2019**

Age	Owner	Renter	Total	Percent
62-64	196	114	310	26.4%
65-74	398	192	590	50.3%
75-84	180	15	195	16.6%
85+	78	0	78	6.7%
<b>Total</b>	<b>852</b>	<b>321</b>	<b>1,173</b>	<b>100.0%</b>
Percent	72.6%	27.4%	100.0%	

Sources: 2015-2019 American Community Survey, Table B25007, Tenure by Age of Householder .31 X 507  
60-64; .6312 owners, .3688 renters

### Living Arrangements of the Elderly

Elderly persons –

- Live alone
- In a housing unit with one or more persons
- Group Quarters

Table A-11 shows that almost 53% of all elderly persons 65 years of age or older live alone. Married couples comprise about one-third of the elderly households 65 years of age or older. Twelve percent of the elderly are male householders, female householders, or live with unrelated individuals. Data are unavailable for the elderly householders aged 62-64 years.

**Table A-11: Elderly Households 65 Years+ by Tenure and Household Type: 2015-2019**

Household Type	Owner	Renter	Total	Percent
Living Alone	295	159	454	52.7%
Married Couples	285	18	303	35.1%
Male Householder	7	18	25	2.9%
Female Householder	9	0	9	1.0%
Not Living Alone	60	12	72	8.3%
<b>Total</b>	<b>656</b>	<b>207</b>	<b>100.0%</b>	<b>100.0%</b>
Percent	76.0%	24.0%	100.0%	100.0%

Sources: 2015-2019 American Community Survey, Table B25011, Tenure by Household Type (including living alone) and Age of Householder

A Group Quarters (GQs) is a place where people live or stay in a group living arrangement that is owned or managed by an entity or organization providing housing and/or services for the residents. People living in GQs usually are not related to each other. GQs include places such skilled nursing facilities and group homes.

One skilled nursing facility (Courtyard Care Center) with a capacity of 59 beds is located in the City. The bed capacity closely matches the most recent ACS group quarters population estimate of 56 persons.

A licensed residential board-and-care home for the elderly is not located in Signal Hill. These homes for the elderly refer to a housing arrangement voluntarily chosen by persons 60 years of age or over based on their needs. Residential board-and-cares are limited to six persons and are usually located in standard single-family homes.

With regard to how living arrangements affect housing needs, the key finding is that very few elderly persons live in group quarters. That is, almost all seniors live in a housing unit. And about one-half of those living in a housing unit live alone. Another key finding is that three-fourths of all elderly householders are owners. This, in turn, means that housing cost burdens are not as extensive as they would be in a community where senior renters would comprise the majority of the population.

### Housing Needs of the Elderly

#### Examples of Housing Needs Experienced by the Elderly

Research on the housing needs of elderly persons has resulted in the following observations:

Older persons experience another very different category of housing-related problems when they have physical or cognitive limitations that make it difficult for them to conduct their usual lifestyles, take care of themselves, or maintain their dwellings without the help of others. Depending on the types and seriousness of their impairments, they may have to adopt one or more of the following options: secure help from family members or move into a family member's home; obtain homemaker assistance, help with personal care, or nursing services from professional paid providers, home-based services, or community care providers, or relocate to a supportive seniors housing option. Older persons that are more at risk of having these limitations and having the fewest options will have one or more of the following risk factors: they will be chronologically very old, will be poor, alone, unable to secure any type of assistance from family, less educated, or belong to a racial or ethnic minority.

Older persons may find that they have significantly less disposable income if they incur out-of-pocket costs for home- and community-based care and health care expenses, in particular prescription medicine costs. Those on fixed incomes may particularly find that paying for these expenses results in their once tolerable housing costs becoming a new burden, and in the case of older homeowners, make it difficult for them to afford their dwelling's maintenance, upkeep, and upgrading costs.

The physical environment of the dwelling has the potential for worsening the effects of these physical and cognitive limitations. The design features and overall physical condition of a dwelling and its location relative to everyday needs may offer new obstacles or even an unsafe environment for impaired older persons to conduct their accustomed lifestyles. Among the possible consequences: a car or a bus route may become unusable and accessing everyday community needs may become very difficult, an upstairs of a dwelling may suddenly become inaccessible, throw rugs may become a walking hazard, using a stove may become unsafe, or a bathroom's shower or toilet may be difficult or impossible to use.

Older persons with unavailable family supports and with the lowest incomes represent the greatest potential demand on their State and locality's government-subsidized long-term care resources. Thus, these limitations are not just a personal affair; they become the "problems" of stakeholders in the public sector.

Source: Stephen M. Golant, Ph.D., *The Housing Problems of the Future Elderly Population*, A Report Prepared for the Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century, January 2002, page 85

## Housing Costs Exceeding Ability to Pay

Housing costs burdens are or will become a serious problem to the elderly with the lowest incomes.

According to SCAG's pre-certified housing data, an 'elderly family' consists of two persons with either or both age 62 or over. Of Signal Hill's 676 such households, 43% have very low incomes—that is, 50% or less of the Los Angeles County median household income. Many, if not the majority, of these very low income households are probably experiencing housing cost burdens.

## Propensity to Fall Among the Elderly

As people get older, particularly after age 75, they become susceptible to falls which often lead to hospitalizations and increased medical costs. A UCLA health study revealed the age-specific propensities to fall:

The proportion of older Californians falling multiple times during the year increases with age. Among those ages 65-74, 10.6 percent reported multiple falls in the past year, compared to 13.8 percent of those 75-84 and 19.3 percent of those ages 85 and over. Multiple falls also occurred more often than average among those with chronic conditions and disabilities, and they were most common among older adults who were legally blind, with almost one third (30.8 percent) reporting multiple falls.

Source: Steven P. Wallace, Ph.D., *UCLA Center for Health Policy Research, More than Half a Million Older Californians Fell Repeatedly in the Past Year, November 2014*, page 1

Table A-12 estimates that 180 elderly persons experience multiple falls during the course of a year.

**Table A-12: Elderly Population Experiencing Multiple Falls: 2015-2019**

Elderly Age Group	Total Population	Percent With Multiple Falls	Estimated Number With Multiple Falls
65-74	996	10.6%	105
75-84	359	13.8%	50
85+	131	19.3%	25
<b>Total</b>	<b>1,486</b>	<b>12.1%</b>	<b>180</b>

Source: Age data from Table A-9

## Frail Elderly Population and Associated Supportive Housing Needs

Based on the Cardiovascular Health Study (CHS), frail elderly indicators include low grip strength, low energy, slowed walking speed, low physical activity, and/or unintentional weight loss. Still other indicators are based on a Frailty Index which accounts for disability, diseases, physical and cognitive impairments, and geriatric syndromes (falls, deliriums).

The frail elderly need assistance to perform daily living activities. The frail elderly may experience difficulty eating, bathing, toileting, etc. by oneself and/or difficulty using the telephone, getting outside, shopping, and doing light housework, etc. by oneself. The frail elderly may be assisted by in-home care, or by residing in supportive housing arrangements.

There are an estimated 114 frail elderly based on the age-specific population and frailty prevalence rates. Table A-13 shows that the frailty prevalence rate increases dramatically for the elderly population 85 years of age or older.

**Table A-13: Estimate of Frail Elderly Population By Age Group: 2015-2019**

Age Group	Total	Frailty Prevalence	Frailty Prevalence
65-74	996	3.9%	39
75-84	359	11.6%	42
85+	131	25.0%	33
<b>Total</b>	<b>1,486</b>	<b>7.7%</b>	<b>114</b>

Source: Table A-X and Qian- Li Xue, PhD, The Frailty Syndrome: Definitions and Natural History , Clinics in Geriatric Medicine, February 1, 2011. Based on Cardiovascular Health Study (CHS)

## Housing Programs and Services Addressing the Needs of the Elderly

### ***Area Agency on Aging Services and Elderly Needs Assessment***

Area Agencies on Aging (AAAs) are local aging programs that provide information and services on a range of assistance for older adults and those who care for them. The federal Older Americans Act (OAA) and the Older Californians Act (OCA) provide the legislative context for California's 33 AAAs to fund specific services, identify unmet needs, and engage in systems development activities.

AAAs are primarily responsible for a geographic area, also known as a planning and service area (PSA), that is a city, a single county, or a multi-county district. The Los Angeles County AAA services the entire Los Angeles County area, which is further organized into eight service planning areas. Signal Hill is located with the Gateway Cities Service Planning Area.

AAAs coordinate and offer services that help older adults remain in their homes, if that is their preference, aided by services such as home-delivered meals, homemaker assistance, and whatever else it may take to make independent living a viable option. By making a range of supports available, AAAs make it possible for older individuals to choose the services and living arrangements that suit them best.

Information provided by the Area Agency on Aging indicates that among the major needs of the elderly are:

- Information regarding available resources
- Senior-friendly transportation services
- Assistive devices or home adaptations

### ***City Resources Directory***

The City has prepared and posted on its website a Resources Directory that includes information on several housing resources including, but not limited, to the following:

- Affordable housing developments located in the City
- Resources available from the Long Beach Housing Authority
- Resources available from the County of Los Angeles Housing Authority
- Information on Hospitals and Medical Centers
- Information available from the Social Security Administration
- Information on Services and Utilities

### ***City Senior Programs***

The Community Services Department administers two senior housing programs and uses CDBG funds to supplement costs for multiple senior support activities and services such as:

- The Senior Food Distribution Program delivers groceries on a weekly basis to seniors 55 years of age or older.
- The subsidized transportation program is available to seniors 62 years of age or older and disabled people 18 years of age or older. The programs provide for reduced fare monthly Bus Pass for Long Beach Transit buses or Dial-A-Taxi vouchers which allow low cost use of the Yellow Cab service. Residents also may be eligible for Dial-A-Lift services, which are certified by Long Beach Transit.

### ***County In Home Supportive Services***

According to the County of Los Angeles Department of Public Social Services (DPSS):

In-Home Supportive Services (IHSS) helps pay for services provided to eligible persons who are 65 years of age or over, or legally blind, or disabled adults and children, so they can remain safely in their own homes. IHSS is considered an alternative to out-of-home care such as nursing homes or board and care facilities.

The types of services which can be authorized through IHSS are housecleaning, meal preparation, laundry, grocery shopping, personal care services (such as bowel and bladder care, bathing, grooming and paramedical services), accompaniment to medical appointments, and protective supervision for the mentally impaired.

This program is a home care program that helps elders, dependent adults and minors live safely in their own homes or other non-institutional settings. Eligible persons include:

- Applicants who meet Medi-Cal eligibility requirements in California.

- Elders, dependent adults and minors whose disability is expected to continue longer than 12 months.
- Elders, dependent adults and minors whose physician or a medical professional has determined that they are unable to remain safely in their own home without IHSS.

Data from the DPSS indicates that 104 Signal Hill elderly 65 years of age or older are participating in the IHSS Program. The number of elderly participating in the program is almost the same as the estimated frail elderly population.

### ***Making Home Modifications***

According to the aforementioned UCLA study:

There is good evidence that interventions addressing multiple risk factors are able to reduce the number of future falls, especially when they target high-risk individuals. Key elements of multifactor fall prevention include evaluating medications to identify those that can cause dizziness; improving gait, balance, and strength through physical therapy and/or exercise programs; using an assistive device (e.g., a cane) to further support balance; *making home modifications*, such as reducing slip and trip risks, since most falls occur inside the person's home; and modifying high-risk daily routines, such as wearing inappropriate footwear or walking on uneven pavement. [Emphasis added]

Source: Steven P. Wallace, Ph.D., UCLA Center for Health Policy Research, *More than Half a Million Older Californians Fell Repeatedly in the Past Year*, November 2014, page 4

The City may be able to support the elderly to make home modifications.

### **Housing Element Policies and Programs**

Based on the foregoing analysis, the 2021-2029 *Housing Element* will include the following types of policies and programs:

- To relieve housing cost burdens, continue to participate in the Section 8 rental assistance program.
- To expand housing choices at potentially reduced costs, implement incentives for ADU development.
- Promote a senior housing development at the Orange Bluff affordable housing site.
- Provide financial assistance, if funding becomes available, to help owners make home modifications.

Section II describes the programs and policies in greater detail.

### **Persons with Disabilities**

#### **Population and Household Characteristics**

Almost 800 residents have one or more disability, a number that represents almost 7% of Signal Hill's total population. The disability prevalence rate, or percent disabled, steadily increases with age. More than

40% of the senior population 75 years old or older has a disability. Table A-14 presents the number and percent of disabled persons by age group.

**Table A-14: Disability Status of Civilian Non-institutionalized Population by Age Group: 2015-2019**

Age Group	Disabled Population	Total Population	Percent Disabled
< 5 years	0	736	0.0%
5-17 years	2	1,419	0.1%
18-34 years	96	2,964	3.2%
35-64 years	376	4,854	7.7%
65-74 years	112	984	11.4%
75 years +	202	466	43.3%
<b>Total</b>	<b>788</b>	<b>11,423</b>	<b>6.9%</b>

Source: 2015-2019 American Community Survey 5-Year Estimates, Table B18101, Sex by Age by Disability Status

Among the disability types tallied (a resident can have more than one disability type) the most prevalent among Signal Hill residents were ambulatory (serious difficulty walking or climbing stairs) and independent living difficulties (difficulty doing errands alone such as visiting a doctor's office or shopping). According to data from the 2015-2019 American Community Survey 5-Year Estimates, 28% of residents with a disability indicated an ambulatory difficulty and 26.3% indicated an independent living difficulty. These disability types indicate the need for accessible housing and housing in a group setting with supportive services. The remaining disabilities tallied include cognitive difficulties (19.2%), self-care difficulties (11.3%), hearing difficulties (9.1%), and vision difficulties (6.1%).

Table A-15 shows that almost 700 households have one or more member with a disability, a number that equals 15% of all households. The member with a disability could be the head of household, a spouse, a child or other related or unrelated person living in the housing unit.

**Table A-15: Disabled Householders: 2015-2019**

Household Disability Status	Number	Percent
Households with one or more persons with a disability	692	14.7%
Households with no persons with a disability	4,027	85.3%
<b>Total</b>	<b>4,719</b>	<b>100.0%</b>

Source: 2018 American Community Survey 1-Year Estimates, Table B22010, Receipt of Food Stamps/SNAP in the Past 12 Months by Disability Status for Households

## Living Arrangements of People with Disabilities

### **Group Living Arrangements**

There are no licensed group homes located in Signal Hill. This means that an Adult Residential Facility (ARF) is not located within the city limits. An ARF is a residential home for adults 18 to 59 with mental health care needs or who have physical or developmental disabilities and require or prefer assistance with care and supervision.

One skilled nursing facility (SNF) with a capacity of 59 beds is located in Signal Hill. Most of the residents of the SNF probably have one or more disability.

Skilled nursing facilities provide a wide range of health and personal care services. Some people stay at a nursing home for a short time after being in the hospital. After they recover, they go home. However, most nursing home residents live there permanently because they have ongoing physical or mental conditions that require constant care and supervision.

The Courtyard Care Center provides residents rehabilitation services, long-term and end-of-life care, social services, and nursing services.

### ***Separate Living Quarters***

Table A-15 shows that nearly than one in six households has a member with a disability. The disabled member, as previously noted, could be the head of household, a spouse, child, relative or other person living in the occupied housing unit.

Almost all the disabled population lives in a housing unit. They do not reside, for the most part, in an institutional setting such as a nursing home or rehabilitation facility.

Table A-16 contains data on the percentage of households with a disabled member by household size. One- and two-person households have the highest incidence of disability; roughly one out of five of these households have a member with a disability.

Regarding unique housing needs, it is noteworthy that 20% of all disabled householders live alone.

**Table A-16: Incidence of Disabled Members by Household Size**

Number of Persons in Household	Percent of Households with Disabled Member
1	20.8%
2	19.3%
3	15.5%
4	10.6%
5	12.6%
6	15.2%
7 or more	18.1%
All households	17.3%

Source: Frederick J. Eggers and Fouad Moumen,  
Econometrics, Inc. Disability Variables in the American  
Housing Survey, prepared for the U.S. Department of  
Housing and Urban Development, Office of Policy  
Development & Research, November 2011, page 13

## Housing Needs of Disabled Persons

The housing needs of disabled persons may include independent living units with affordable housing costs; supportive housing with affordable housing costs; and housing with design features that facilitate mobility and independence. The shortage of available, accessible, and/or affordable housing is an acute problem for most people with disabilities (PWD).

More specifically, the special needs of disabled persons may include:

- Accessibility and suitability of key „functional rooms“ such as bathrooms, kitchens, toilets (including extra downstairs toilets) which enable disabled people to conduct their own activities of living
- Structural needs such as wheelchair accessibility, no internal stairs, bathroom with grab bars
- Flat, level ground between garage and entryway
- Non-porch stairs
- Modifications to housing unit
- Assistance with maintenance and repairs
- Close proximity to doctors, caregivers
- Housing costs with the means of ability to pay

To meet some of their special needs, renters may request that their landlords approve requests for reasonable accommodations and/or reasonable modifications. Renters may also need to move to find housing that meets their special needs. On the other hand, disabled homeowners may remain in their homes and make adaptations.

## Housing Programs and Services Addressing the Needs of Persons with Disabilities

### *Services that Assist Elderly and Non-Elderly Disabled Persons*

The persons living in housing units make their home within a neighborhood. Some have become disabled while they lived in the same neighborhood and home. Some, too, are cared for by family members who live in the same home or relatives who have a home nearby. Still others receive care from the In Home Supportive Services Program. Indeed, as of October 2020, 184 City residents were being helped by the IHSS Program. Refer to Table A-17 below.

**Table A-17: Residents Participating in the IHSS Program By Age Group: October 2020**

Age Group	Number	Percent
<1 to 24	20	10.9%
25-59	41	22.3%
60-65	19	10.3%
Over 65	104	56.5%
Total	184	100.0%

Source: County of Los Angeles, Department of Public Social Services, Signal Hill Statistical Report, October 2020

The In-Home Supportive Services Program helps pay for services provided to eligible persons who are 65 years of age or over, or legally blind or disabled adults and children, so they can remain safely in their own

homes. IHSS is considered an alternative to out-of-home care, such as nursing homes or board and care facilities.

### ***Community Based Transition Services***

Under the landmark 1999 U.S. Supreme Court Olmstead decision, the state of California is required to accommodate those with physical, mental or developmental disabilities who live in institutions, or are at risk of doing so, in the least restrictive settings possible. Living in “institutions” is considered living in a segregated setting - that is, all other persons living in the institution are disabled.

The “institutional” setting in the Olmstead decision was a psychiatric hospital. Additional institutional settings include “institutions for mental disease,” mental health rehabilitation centers, hospitals and rehabilitation centers, and nursing facilities. Some disabled persons living in a nursing facility may qualify for living in a community setting with attendant care.

Signal Hill is located within the service area of the Disabled Resource Center, which is located in Long Beach. The Center is one of California’s 28 Independent Living Centers. Title II, Chapter 1 of the Rehabilitation Act of 1973, established the Independent Living Centers and makes funding available for providing, expanding, and improving the provision of independent living services.

The Disabled Resource Center can assist people with disabilities who wish to transition from living in an institutional setting to live independently in the community.

### ***Sea Breeze Manor***

Constructed in 1997, Sea Breeze Manor is a 24-unit development designed for disabled persons. Located at 2007 Alamitos Avenue and just south of Signal Hill Park, the special needs housing development has 1- and 2-bedrooms units. Federal assistance to the project was provided in the form of a Section 811 capital grant. The interest-free capital grant, or advance, does not have to be re-paid as long as the housing remains available for very low-income persons with disabilities.

The Signal Hill Redevelopment Agency provided \$1 million in financial assistance in the form of a land contribution. The Sea Breeze Manor affordability covenant runs for a period of 55 years.

### **Housing Element Policies and Programs**

Based on the foregoing analysis, the 2021-2029 Housing Element will include the following types of policies and programs:

- To relieve housing cost burdens, continue to promote Section 8 rental assistance
- Promote and make the community aware of the Reasonable Accommodation Procedure
- Provide information to apartment owners, property management companies and on-site property managers regarding reasonable accommodations, reasonable modifications; and service and companion animals
- Coordinate with the Disabled Resource Center to promote independent living services
- Maintain the Sea Breeze as a special needs housing development
- Provide financial assistance, if possible, to make home modifications

Some of the policies and programs also have the objective of affirmatively furthering fair housing.

Section II describes the programs and policies in greater detail.

## Persons with Developmental Disabilities

### Harbor Regional Center Customers

According to Section 4512 of the Welfare and Institutions Code a "developmental disability" means a disability that originates before an individual attains age 18 years, continues, or can be expected to continue, indefinitely, and constitutes a substantial disability for that individual which includes mental retardation, cerebral palsy, epilepsy, and autism. This term shall also include disabling conditions found to be closely related to mental retardation or to require treatment similar to that required for individuals with mental retardation but shall not include other handicapping conditions that are solely physical in nature."

Signal Hill is located within the service area of the Harbor Regional Center (HRC), which is one California's 21 regional centers. The HRC serves approximately 14,000 customers.

A person may have more than one developmental disability. More than half of Harbor Regional Center clients have intellectual disability, and many also have a second developmental disability

such as epilepsy. People with developmental disabilities also may have conditions such as heart defects, allergies, and mental health problems. Some Regional Center clients have serious medical conditions in addition to one or more developmental disabilities.

The California Department of Development Services publishes counts of consumers by zip code. The Department serves 99 consumers in Signal Hill's 90755 zip code:

- 60 customers are 17 years of age or younger
- 39 customers are 18 years of age or older.

### Living Arrangements

Many developmentally disabled persons can live and work independently within a conventional housing environment. More severely disabled individuals require a group living environment where supervision is provided. The most severely affected individuals may require an institutional environment where medical attention and physical therapy are provided. Because developmental disabilities exist before adulthood, the first issue in supportive housing for the developmentally disabled is the transition from the person's living situation as a child to an appropriate level of independence as an adult.

Table A-18 shows that almost all (89 of 99) of the developmentally disabled persons live in the home of a parent, family member, or guardian. None are living in an institutional setting such as a skilled nursing facility (SNF), Intermediate Care Facility (ICF), developmental Center, or other settings such as hospitals and community treatment facilities.

**Table A-18: Living Quarters of Persons with Developmental Disabilities: End of June 2019**

Home of Parent/Family/Guardian	89
Independent/Supported Living	<11
Community Care Facility	0
Intermediate Care Facility	0
Foster/Family Home	<11
Other	0
Age 0-17 years	60
Age 18+ years	39

Source: California Department of Developmental Services, Consumer Count by California ZIP Code and Residence Type, end of June 2019

### Housing Needs of Developmentally Disabled Persons

According to the State Department of Developmental Services:

Affordable housing is a cornerstone to individuals with developmental disabilities residing in their local communities. Due to the high cost of housing in California, many individuals served by the regional centers require deep subsidies in order to make housing affordable. DDS is actively pursuing projects that will increase capacity and precipitate the construction of new affordable housing.

Signal Hill's developmentally disabled population can live in a "home" environment, rather than an "institutional" setting. However, to live on one's own rental assistance is needed.

### Housing Programs and Services Addressing the Needs of Persons with Developmental Disabilities

#### *State Department of Developmental Services*

The State Department of Developmental Services (DDS) currently provides community-based services to approximately 243,000 persons with developmental disabilities and their families through a statewide system of 21 regional centers, four developmental centers, and two community-based facilities.

DDS has followed the Lanterman Act's direction to promote "opportunities for individuals with developmental disabilities to be integrated into the mainstream of life in their home communities, including supported living and other appropriate community living arrangements."

#### *Harbor Regional Center*

Harbor Regional Center provides free intake and assessment services to any person who is believed to have a developmental disability. The purpose of the intake and assessment is to determine whether the person is eligible for ongoing regional center services. To be eligible for ongoing services, the condition must have occurred before the age of 18, be likely to continue indefinitely, and constitute a "substantial" disability for the person. A disability is "substantial" if it affects three or more of seven major life areas (for example, a person's ability to communicate or to learn).

For individuals with developmental disabilities, and their families, Harbor Regional Center can provide diagnosis and evaluation, information and referral, individual or family service planning, family support, and assistance in finding and using community resources.

### ***HOPE Housing***

HOPE is a housing dedicated non-profit that partners with Regional Centers to offer a variety of housing programs. Since 1995 HOPE's programs have been allowing people with developmental disabilities to live a life they may have only dreamed about. In either affordable housing, state-licensed group homes, or in a college dorm setting,

Together, HOPE and the Regional Centers are a team, creating opportunities through three housing options:

- Affordable Rental Housing
- State-Licensed Residential Homes
- College housing for the College to Career (C2C) program.

### **Housing Element Policies and Programs**

Based on the foregoing analysis, the 2021-2029 Housing Element will include the following types of policies and programs:

- Work with HOPE the opportunities to create an affordable group home
- Work with the Harbor Regional Center the need for home modifications in homes occupied by persons with developmental disabilities
- Post on the City's website information on the services and resources available from the Harbor Regional Center
- Work with HOPE Housing and Disabled Resource Center the opportunities that may be available to transition developmentally disabled persons from an institutional setting to a home environment

Section II describes the programs and policies in greater detail.

### **Large Families**

#### **Population and Household Characteristics**

Large families are households consisting of five or more persons. Table A-19 shows that large families comprise neither a large number (394) nor high percentage (8.3%) of all the City's households. Renters constitute 71% of all large families.

**Table A-19: Tenure by Household Size: 2015-2019**

Households Size (Number of Persons)	Owner Occupied	Renter Occupied	Total Households	Percent Distribution
5	41	174	215	54.6%
6	73	77	150	38.1%
7+	0	29	29	7.3%
<b>Total</b>	<b>114</b>	<b>280</b>	<b>394</b>	<b>100.0%</b>
Percent	29%	71%		

Source: 2015-2019 American Community Survey 5-Year Estimates, Table B25009,  
Tenure by Household Size

### Housing Needs of Large Families

The supply of rental units with three or more bedrooms (393) is almost the same as the number of large families (394).

Affordable housing is a fundamental need of large families. According to ACS data, the monthly gross rents of almost all units with three or more bedrooms were \$1,500 or more. More recent data from Apartment.com indicates a three-bedroom unit probably commands a monthly rent of \$2,500. Monthly rents at these levels probably are not within the ability to pay of lower income, large families.

Larger families may also need an additional bedroom. Owners, if they have enough income, can pay for a bedroom addition or the construction of an accessory dwelling unit.

On the other hand, renters are constrained by the inability to add space to their housing unit, especially if it is an apartment unit. Large family renters who need more space will probably need to move to a larger rental unit, perhaps a single-family home.

### Housing Programs and Services Addressing the Needs of Large Families

#### *Affordable 3 Bedroom Apartment Units*

The housing stock includes five affordable apartment developments, three of which have larger (3-bedroom) units. The developments with 3-bedroom units include Las Brisas Community Housing, Las Brisas II and Zinnia Apartments.

#### *County Down Payment Assistance Program*

Lower income renter householders are eligible to participate in the County of Los Angeles Down Payment Assistance Program. Renter householders with incomes at the moderate-income level or below are eligible to participate in the Mortgage Credit Certificate (MCC) Program. Large renter families can obtain more living by moving to a single-family home.

### **Funding for the Development of Accessory Dwelling Units (ADUs)**

The County of Los Angeles Community Development Authority plans to provide funding to provide loans for the predevelopment and development of accessory dwelling units. ADUs can provide the additional bedrooms needed by large families living in owner-occupied housing.

### **Housing Element Policies and Programs**

Based on the foregoing analysis, the *2021-2029 Housing Element* will include the following types of policies and programs:

- Maintain the affordable rental housing with three or more bedrooms.
- Inform residents of the County's down payment assistance program which assists large renter families to buy a home with three or more bedrooms (see below)
- Continue to not charge fees for the development of ADUs
- Promote a large family housing development at the Orange Bluff affordable housing site

The County's Home Ownership Program (HOP) loan provides a second mortgage loan for first-time homebuyers with an assistance amount of up to \$85,000, or 20% of the purchase prices, whichever is less.

Section II describes the programs and policies in greater detail.

## **Farmworkers**

### **Population and Household Characteristics**

A farm worker is –

- A person who performs manual and/or hand tool labor to plant, cultivate, harvest, pack and/or load field crops and other plant life.
- A person who attends to live farm, ranch or aquacultural animals including those produced for animal products.

Source: State of California, Employment Development Department, Labor Market Information Division, Occupational Definitions

SCAG's *Pre-Certified Local Housing Data* found zero farmworkers employed in the City.

The City has no land devoted to the production of field crops and/or other plant life. Likewise, there is no land used for animals. As a result, there are no farmworker jobs located in Signal Hill. There may be persons residing or "housed" in the City who are farmworkers at locations outside the municipal boundaries.

Los Angeles County has seen a significant decrease in agricultural workers. State EDD data (CA) Employment Development Department, Industry Employment & Labor Force data for the Los Angeles-Long Beach-Glendale, March 2020) shows that between 2000 and 2020, the number of farmworkers countywide decreased by 43 percent, from 7,700 to 4,400 farmworkers. Agricultural practices no longer account for a significant sector of Los Angeles County's economy, and as more agricultural land is

converted for nonagricultural uses, this sector will continue to decline. Maps from the State of California Department of Conservation Farmland Mapping and Monitoring Program show no farmland in the City of Signal Hill and most of the Los Angeles basin, is classified as “Urban and Built-Up Land”.

### Housing Needs of Farmworkers

Due to the low number of agricultural workers in the City and with farming activities not being located near Signal Hill, there is a very low need for farmworker housing in the City. Any *housed* “farmworkers” who may reside in the City would live in a household and occupy a housing unit. As such, they would be among the existing households counted as part of the existing housing needs and estimates of existing and projected housing needs produced by HCD and SCAG. That is, the resident farmworker housing needs would be counted as part of the lower income households experiencing problems of overpaying, overcrowding, and living in substandard housing and their housing needs can be met through general affordable housing programs.

### Female Householders

#### Population and Household Characteristics

A *household* includes all the people who occupy a housing unit. People who are not living in households are classified as living in group quarters or are homeless. One person in each household is designated as the *householder*. In most cases, this is the person or one of the people in whose name the home is owned, being bought, or rented.

There are two household types: family and non-family.

A *family* consists of a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family.

A family may consist of a married couple, cohabiting couple, male householder, or *female householder*.

A nonfamily household is a householder living alone or with nonrelatives only. Therefore, a female householder can be:

- A family with a female householder and no spouse of the householder present
- A nonfamily householder who lives alone or with nonrelatives only Furthermore, a family female householder may have children or no children.

The ACS estimates that 1,425 female householders live in Signal Hill, a number that represents 30% of all households. The majority – 854 - of all female householders live alone while 571 occupy a housing unit with at least other person. The ACS estimates that 317 female householder have children.

### Housing Needs of Female Householders

Housing needs often experienced by female householders may include:

- Housing with costs within their ability to pay
- Housing in close proximity to work place
- Access to housing which accommodates children
- Availability of affordable child care for working parents
- Access to housing near parks and open space to serve the needs of female householders with children.
- Access to housing which is designed for security and convenience
- Assistance with maintenance and repairs for elderly women living alone

## Housing Programs and Services Addressing the Needs of Female Householders

### ***Child Care Centers***

Childcare centers located in Signal Hill include five locations serving 243 children. The Long Beach Community Improvement League provides subsidized services to 112 pre-school age children and 29 school-age children. The Signal Hill Center is adjacent two large family affordable housing developments.

Also located in the City is a Head Start program with a capacity to serve 60 children. In addition, three family childcare homes with a combined capacity of 42 children are located in City. The Las Brisas affordable housing projects provide child-care and educational services through the Long Beach Community Improvement League.

The City's Community Services Department provides a childcare program for children entering kindergarten through 5th grade. Daily activities include distance learning support, arts and crafts, outdoor play as well as other activities. The program, which operates from 7:45 am to 5:00 pm, has a \$96 bi-weekly fee.

## **Los Angeles County Department of Public Social Services (DPSS)**

The DPSS childcare programs provide childcare payments to a variety of eligible families. From working CalWORKS recipients to parents of children receiving protective services, the childcare programs offer families access to help with childcare expenses. All childcare funds are paid on behalf of the customer directly to the provider of their choice.

## **Child Care Resource & Referral**

This state and federally funded program assist parents in Los Angeles County with finding licensed childcare near their home, work, or child's school. The computerized, geographically based program lists over 2,800 licensed centers and family childcare homes. The Online Referral System requests the following family and children information:

- Location: near home, near work/school, near child/children's school
- Preferred provider type: family childcare home, childcare center, or other

## **Housing Element Policies and Programs**

Based on the foregoing analysis, the 2021-2029 Housing Element will include the following types of policies and programs:

- Work with the Housing Rights Center to ensure that female householders are free from housing discrimination on the basis of sex and familial status.
- Amend the Zoning Ordinance to comply with State law that addresses the special needs of female householders.

As an example of the above, the City will adopt a Zoning Ordinance amendment to comply with SB 234 – Keeping Kids Closer to Home Act. This bill established the “Keeping Kids Closer to Home Act” which aims to expand childcare opportunities for California families. This legislation allows large family childcare homes that provide care for up to 14 children in multifamily units, meaning these large family daycare homes are now to be treated as a residential use of property in local ordinances. The bill also prohibits a property owner or manager from refusing to sell or rent a dwelling unit to a person that is a daycare provider. The law prohibits local jurisdictions from imposing a business license, fee, or tax for the privilege of operating both small and large daycare homes as well.

Section II describes the programs and policies in greater detail.

## Families and Persons in Need of Emergency Shelter

### Unsheltered Homeless

Unsheltered homeless are defined as those who reside in places not meant for human habitation, such as cars, parks, sidewalks, abandoned buildings, or on the street.

The 2020 Los Angeles County Homeless Point in Time (PIT) Count found 46 unsheltered homeless adults and children in Signal Hill. According to Table A-20, 14 homeless persons live on the street, in makeshift shelters and tents. Thirty-two homeless persons occupy a vehicle of some type. It is unknown how many of the homeless persons living in a vehicle would use an emergency shelter.

### Emergency Shelter Zoning and Shelter Space Needs

SB 2 (Housing for the Homeless) of 2008 requires that jurisdictions, within one year of the 4th cycle Housing Element adoption, amend the zoning ordinance to identify a zone or zones where year-round emergency shelters for the homeless would be permitted by right without discretionary review. SB 2 of 2008 allows limited flexibility for local governments to apply written, objective development and management standards for emergency shelters as described below:

- The maximum number of beds or persons permitted to be served nightly by the facility.
- Off-street parking based upon demonstrated need, provided that the standards do not require more parking for emergency shelters than for other residential or commercial uses within the same zone.
- The size and location of exterior and interior on-site waiting and client intake areas.
- The provision of on-site management.
- The proximity to other emergency shelters provided that emergency shelters are not required to be more than 300 feet apart.
- The length of stay.
- Lighting.
- Security during hours that the emergency shelter is in operation.

In Signal Hill, the CG Zone permits by right an emergency shelter with a maximum of 16 beds. This means that shelters with 16 or less beds are permitted without discretionary action in the CG zone. Additional beds are considered in the CG Zone under a Conditional Use Permit. The City's development standards can be found in Section 20.20.020 of the City's municipal code and include the provisions below all of which are consistent with state law. State law indicates that off-street parking must be based upon demonstrated need, provided that the standards do not require more parking for emergency shelters than for other residential or commercial uses within the same zone. The parking standards for emergency shelters comply with this requirement by requiring 1 space for each employee and/or volunteer, 1 additional parking space for every 5 beds, and 1 space for each transport van or delivery vehicle. The requirement for one parking space per 5 beds is included to reflect the needs of persons experiencing homelessness that own or live in their vehicles. The Point in Time 2020 count data for Service Planning Area 8 (which includes Signal Hill) shows that there were 1,846 persons are living in cars, vans, and campers. The requirement would add only 3 parking spaces for a 16-bed shelter. In comparison other commercial and office uses in the CG zone require 1 space per 250 square feet of space. Using efficiency dwelling unit standards an example (which require 220 square feet for the first occupant and 100 square feet for all additional persons), a typical 16-bed shelter would need 1,520 square feet of space (excludes office areas) which translates to 6 spaces, twice the parking required for emergency shelters.

- 20.20.020 PP. Residential: Care facility - Emergency Shelters Development Standards
- Maximum number of beds:
  - A maximum of 16 beds will be allowed by right in the CG zone.
  - Additional facilities/beds will be considered in the CG zone under a conditional use permit.
- Parking:
  - 1 space for each employee and/or volunteer during the work shift with the greatest number of staff on site, as identified in the Facilities Management Plan and 1 additional parking space for every 5 beds and 1 space for each transport van or delivery vehicle.
- Waiting and client intake areas:
  - Interior area: 150 square feet minimum
  - Exterior area: Must be screened from public view
- Security lighting:
  - External lighting shall be provided for security purposes. The lighting shall be stationary, directed away from adjacent properties and public rights-of-way, and of an intensity compatible with the neighborhood.
- Minimum separation distance:
  - 300 feet from any other emergency shelter.
- All other CG standards per Title 20 of the Municipal Code and Building and Safety standards per Title 15 of the Municipal Code:
- Apply to all facilities.
  - Operational Standards

- Each facility operator or applicant shall provide a detailed Facilities Management Plan to be submitted and updated annually and shall include such items as:
  - Qualifications of management organization
  - Number of staff and volunteers per shift
  - Ratio of staff to clients
  - Training and qualifications of staff and volunteers
  - Duties of staff and volunteers
  - Type of services and social services offered
  - Intake and release times
  - Good neighbor communication plan
- Length of stay: Maximum 6 months.
- Hours of operation:
  - Hours of intake to assign sleeping accommodations are generally between 5 p.m. and 9 a.m. with flexibility per the details of each Facilities Management Plan.
- On-site Management:
  - Agency or Organization must have experience in managing and/or providing social services. Facility Management Plan must be provided.
- On-site security: 24-hour security services:
  - A minimum of 1 security guard on site with a valid CA guard card issued by the CA Department of Consumer Affairs - Bureau of Security & Investigations

The CG zone encompasses 34.5 acres of the City primarily along the western (north of Willow Street) and northern boundaries of the City. Along the northern boundary of the City, the CG zone includes a variety of commercial uses. On the west side of the City, the CG zone is clustered just across the street from the Long Beach Medical Center and includes a variety of commercial office uses, residential uses, and medical uses. While some more intense (and older) industrial uses can be seen, they have not been a constrain to development in the areas. Newer uses such as a Kaiser Permanente medical office building and an Islamic church have been developed recently.

The living space standards of efficiency dwelling units was relied on to calculate an order of magnitude estimate of the square footage needed to accommodate 46 homeless persons. The efficiency dwelling unit standard is 220 square feet for the first occupant and 100 square feet for all additional persons. Thus, somewhat less than 5,000 square feet would be needed to provide enough sleeping space for 46 homeless persons. Additional space would be needed for staff, bathrooms, etc. It is assumed that 10,000 square feet would be sufficient to meet the space needs generated by an emergency shelter housing 46 persons. These requirements can be met in the CG zone. There are 37 parcels in the CG zone with an average size of just under one acre (0.93 acres). Uses such as commercial, office, and residential buildings can be repurposed for use as emergency shelters.

The CG Commercial Zone is intended to provide for a wide variety of service and retail uses. On the west and north side of the City, the CG zone is located across form a commercial corridor in the City of Long Beach (Atlantic Avenue and Wardlow Road). The proximity of the GC zone to a variety of medical uses including a major hospital, is beneficial as persons experiencing homelessness needing health care services have traditionally relied on emergency rooms, clinics, and hospitals. Transportation access is also important. The zone is in close proximity to the Wardlow and Willow Street stations for the Metro Blue

Line light rail. The Blue line connects the area to The City of Long Beach to the south and up to Downtown Los Angeles where a variety of transit connections to the regions are available. The CG zone is also walking distance to bus stops for a variety of Long Beach Transit bus lines running along Willow Street, Atlantic Avenue, Wardlow Road, and Orange Avenue. Regional freeway access to the CG zone is from I-405 via the Atlantic Avenue exit.

**Table A-20: 2020 Point-in-Time Homeless Count**

Living Arrangement	Number
Persons in Cars	14
Persons in Vans	14
Persons on the Street	11
Persons in RVs/Campers	4
Persons in Makeshift Shelters	2
Persons in Tents	1
<b>Total</b>	<b>46</b>

Source: Los Angeles Homeless Services Authority, 2020 Point-in-Time Homeless County, Homeless County by City

Space for an emergency shelter(s) in the CG Zone becomes available as buildings become vacant for sale or lease through business turnover.

### Homeless Services and Shelters

The Long Beach Multi-Service Center (MSC) for the Homeless is located on 12<sup>th</sup> Street in Long Beach. The MSC provides outreach services, intake and assessment services, case management as well as referrals to shelters and other social service programs.

### Housing Element Policies and Programs

Based on the foregoing analysis, the 2021-2029 *Housing Element* will include the following types of policies and programs:

- Amend the Zoning Ordinance to permit “low barrier navigation centers,” as mandated by State law.
- Amend emergency shelter parking standards to limit required parking to only number of spaces sufficient to accommodate staff working at the shelter. The parking requirements based on beds and for transport vans or delivery vehicles will be removed.

## PROJECTED HOUSING NEEDS

### Population Trends and Projections

The January 1, 2020 Department of Finance (DOF) population estimate is 11,712 persons. Of the total population, 11,666 live in households (housing units) and 46 persons live in group quarters. The DOF group quarters population estimate of 46 persons is slightly less than the ACS estimate of 56 persons.

During the nearly 10-year period between April 1, 2010 Census and January 1, 2020, the City's population grew by 696 persons or 6.3%. The annual average population gain was almost 70 persons.

An estimated 1,250 persons would be added to the total population if the City's RHNA was constructed by 2029. This estimate is based on an average household size of 2.42 persons applied to the RHNA need of 516 housing units.

## 2. Employment Trends and Projections

In 2016, 16,900 jobs were located in Signal Hill, according to SCAG's *Connect SoCal Demographics and Growth Forecast*. By 2045, the growth forecast expects 18,400 jobs to be located in the City, a net increase of 1,500 jobs over a 29-year period. The average annual jobs increase of 52 jobs means that 416 jobs could be added during the 2021-2029 planning period.

The top 5 employers In Signal Hill as of 2019-2020 are (in order of number of employees):

1. Office Depot
2. Home Depot
3. Costco Wholesale
4. Target
5. Total Safety US Inc.

According to SCAG's Pre-certified Local Housing Data (2021), Signal Hill has 6,113 workers living within its borders who work across 13 major industrial sectors. Table A-21 provides detailed employment information. The most prevalent industry is Education & Social Services with 1,472 employees (24.1% of total) and the second most prevalent industry is Professional Services. with 908 employees (14.9% of total).

**Table A-21: Employment and Earning by Industry**

Industry	Persons	Percent of Civilian Employed Population 16+ years	Median Earnings	Percent of Overall Median Earnings
Agriculture, forestry, fishing and hunting, and mining	11	0.2%	N/A	N/A
Construction	238	3.9%	\$26,429	56%
Manufacturing	722	11.8%	\$63,500	133%
Wholesale trade	230	3.8%	\$51,538	108%
Retail trade	401	6.6%	\$19,143	40%
Transportation and warehousing, and utilities	433	7.1%	\$52,030	109%
Information	125	2.0%	\$106,354	223%
Finance and insurance, and real estate and rental and leasing	318	5.2%	\$67,833	142%
Professional, scientific, and management, and administrative and waste management services	908	14.9%	\$48,816	103%

**Table A-21: Employment and Earning by Industry**

<b>Industry</b>	<b>Persons</b>	<b>Percent of Civilian Employed Population 16+ years</b>	<b>Median Earnings</b>	<b>Percent of Overall Median Earnings</b>
Educational services, and health care and social assistance	1,472	24.1%	\$46,739	98%
Arts, entertainment, and recreation, and accommodation and food services	530	8.7%	\$35,801	75%
Other services, except public administration	494	8.1%	\$30,267	64%
Public administration	231	3.8%	\$83,950	176%
<b>Total</b>	<b>6113</b>	<b>100.0%</b>	<b>\$47,605</b>	<b>100%</b>

Source: 2015-2018 American Community Survey 5-Year Estimates, Table S2403: Industry By Sex For The Civilian Employed Population 16 Years And Over and Table S2413 Industry By Sex For The Civilian Employed Population 16 Years And Over

Employment characteristics are important as they have a direct relationship with income. In Signal Hill, the top industries that employ residents have higher earnings. The top three industries which employ more than half of residents (Education/Social Services, Professional Services, and Manufacturing) pay just below or above the median earnings. Workers in these three industries have median earnings of 98%, 103%, and 133% of the overall median earnings of all Signal Hill residents (\$47,605) respectively. In comparison, the three industries with the lowest earnings (Retail Trade, Construction, and Other Services) only employ 18.5% of employed residents.

According to ACS data, the City's average number of workers per household is 1.33. The workers per household ratio of 1.33 translates to an associated increase of 313 households based on job growth alone. ( $416 / 1.33 = 313$ ). However, not all of the workers who filled the jobs would choose to move from their current residence to the City.

Job growth alone would not generate the need for new housing in the number calculated as Signal Hill's share of the regional housing need (516).

## Share of Regional Housing Needs/Regional Housing Needs Assessment

The SCAG Region's housing need was determined by HCD. The SCAG "region" encompasses the counties of Ventura, Los Angeles, Orange, Riverside, San Bernardino and Imperial.

On August 22, 2019, HCD provided SCAG with a numerical determination of the region's existing and projected housing need (1,344,740) for the 8.3 year period from June 30, 2021 to October 15, 2029.

On September 18, 2019 SCAG transmitted to HCD a letter objecting to HCD's regional housing need determination. The objection letter offered alternative regional need determinations ranging between 823,808 and 920,772 housing units.

On October 15, 2019, HCD notified SCAG that it disagreed with SCAG's objection letter and issued the *Final Regional Housing Needs Assessment*, as shown in Table A-22.

Given the final determination of the regional housing need, SCAG's responsibility then became establishing a methodology to distribute, meaning allocate, a share of the total regional housing need of 1,341,827 housing units to each county (6) and city (191) in the region. The total regional housing need is comprised of two components: projected need and existing need.

Three components comprise the regional *projected* need of 504,970 housing units: household growth (466,958); future vacancy need (14,467); and replacement need (23,545).

The regional *existing* need is 836,857 housing units (total need of 1,341,827 minus projected need of 504,970).

**Table A-22: SCAG Region: Final Regional  
Housing Needs Assessment June 30,  
2021 October 15, 2029**

Income Group	Number of Housing Units
Very Low	351,796
Low	223,807
Moderate	223,967
Above Moderate	559,267
Total	1,341,827

Source: California Department of Housing and Community Development, SCAG Region, Final Regional Housing Needs Assessment

SCAG's Regional Council voted to approve a *Draft RHNA Methodology* on November 7, 2019 and authorized its transmittal to HCD for their statutorily required review. On January 13, 2020, HCD completed its review of the draft methodology and found that it furthers the objectives of the Regional Housing Need Assessment (RHNA).

On March 4, 2020, SCAG's Regional Council voted to approve the *Final RHNA Methodology*. To determine a jurisdiction's projected need, the *Final RHNA Methodology* uses a three-step process:

- Determine the jurisdiction's regional projected household growth *based on local input*
- Determine future vacancy need based on a jurisdiction's existing composition of owner and renter households and apply a vacancy rate on projected household growth based on the following:
  - Apply a 1.5% vacancy need for owner households
  - Apply a 5.0% vacancy need for renter households
- Determine a jurisdiction's net replacement need based on replacement need survey results (replacement need refers to adding new housing because dwellings have been lost from the stock because of fire and other reasons)

For Signal Hill the RHNA methodology to determine the City's projected housing need resulted in the following numbers:

▪ Projected Need Based on <i>Local Input</i> :	172 housing units
▪ Vacancy Adjustment:	5 housing units
▪ Replacement Need:	0 housing units
▪ Total Projected Need:	177 housing units

For Signal Hill all housing units demolished between 2008 and 2018 had been replaced resulting in a replacement need of zero units.

Existing need, as explained by HCD, refers to legislative changes which are intended to explicitly address housing production “backlog.” The backlog refers to persons living in existing housing units who would live independent of others (a household) if there were sufficient housing production.

Government Code Section 65584.01(b)(1) mentions two indicators that are intended to capture the “backlog” and formed the basis for computing “existing need.”:

- Overcrowded households: “more than one resident per room in each room in a dwelling.”
- Cost burdened: the share of very low-, low-, moderate-, and above moderate-income households that are paying more than 30 percent of household income on housing costs.”

The total existing need of 836,857 housing units was allocated or split into two parts:

- 50% was allocated on the basis of population near transit; that is, designated High Quality Transit Areas (HQTAs).

Signal Hill’s share of the regional population within HQTAs is 0.12%

- 50% allocated on the basis of jobs accessibility.

Signal Hill’s share of the regional jobs accessibility is 0.09%.

The Final RHNA Methodology allocates 517 housing units to Signal Hill:

▪ Projected Household Growth	172
▪ Vacancy Adjustment	5
▪ Replacement Need	0
▪ Existing Need	<u>340</u>
▪ Total RHNA Allocation	517

Projected and existing need comprise 34% (177) and 66% (340), respectively, of Signal Hill’s RHNA allocation of housing need.

After determining a jurisdiction’s total RHNA allocation, the next step is to assign the total into four RHNA income categories. The four RHNA income categories are:

- Very low (50% or less of the county median income)
- Low (50-80%)
- Moderate (80 to 120%)
- Above moderate (120%and above)

One RHNA objective specifically requires that the RHNA methodology allocate a lower proportion of housing need to jurisdictions that already have a disproportionately high concentration of those households in comparison to the county distribution. Additionally, another objective, affirmatively furthering fair housing (AFFH), requires that the RHNA methodology further the objectives of addressing significant disparities in housing needs and access to opportunity in order to overcome patterns of segregation.

Therefore, based on the Final RHNA allocation by income group, the City's share of the regional housing need contributes to AFFH.

With the Regional Council's adoption of Connect SoCal in its entirety on September 3, 2020, SCAG distributed the draft RHNA Allocation to local jurisdictions on September 4, 2020.

Table A- 23 shows the allocation of 516 housing units to five income groups. The very low income group is divided into "extremely low (0-30% of county median income) and very low (30- 50% of county median income). The lower income housing need is 238 housing units.

The 6th Cycle (2021-2029) housing need total is three times the 5th Cycle (2013-2021) housing need allocation of 169 housing units.

Jurisdictions were able appeal their draft allocations of the regional housing need. The SCAG RHNA Appeals Board held public hearings on almost 50 appeals between January 6 and January 22, 2021 On February 4, 2021, the Community, Economic and Human Development Committee (CEHD) and Regional Council action to approve Final RHNA Allocation Plan.

**Table A-23: Share of Regional Housing Needs June 30, 2021 – October 15, 2029**

Income Group	Number	Percent
Extremely Low	80	15.5%
Very Low	81	15.5%
Low	78	15.1%
Moderate	90	17.4%
Above Moderate	188	36.5%
<b>Total:</b>	<b>517</b>	<b>100.0%</b>

Source: Southern California Association of Governments, 6th Cycle Final RHNA Allocation Plan (approved by HCD on 3/22/21) and modified on 7/1/21

**APPENDIX B  
ASSESSMENT OF FAIR HOUSING**

# APPENDIX B

## ASSESSMENT OF FAIR HOUSING

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### GOVERNMENT CODE REQUIREMENTS

#### Background

##### HUD's Assessment of Fair Housing

On July 16, 2015, the U.S. Department of Housing and Urban Development (HUD) published a final rule on Affirmatively Furthering Fair Housing (AFFH rule).<sup>1</sup> The AFFH rule established a process that certain recipients of HUD funding (referred to in the rule as program participant) were to use to help them meet their long-standing obligations to affirmatively further fair housing. The AFFH rule created a standardized process for fair housing planning – referred to in the AFFH rule as an Assessment of Fair Housing (AFH).

On January 5, 2018 HUD published a notice in the Federal Register suspending the obligation to prepare and submit an AFH.

In the *Federal Register* notice, HUD claimed that, based on reviews of the 49 initial AFHs submissions, local governments needed additional time and technical assistance to adjust to the AFFH process and complete AFH submissions that HUD could accept. Thirty-five percent of the 49 submissions (17 submissions) were not accepted when first submitted. HUD did not discuss why they were not accepted or how meaningful the deficiencies were.

##### AB 686 (Santiago)

AB 686 was introduced on April 3, 2017. The June 4, 2018 version added the Assessment of Fair Housing to the program requirements of a local housing element, beginning on January 1, 2021. Government Code Section 65583(c)(5) states the housing program shall -

Promote and affirmatively further fair housing opportunities and promote housing throughout the community or communities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability, and other characteristics protected by the California Fair Employment and Housing Act (Part 2.8 (commencing with Section 12900) of Division 3 of Title 2), Section 65008, and any other state and federal fair housing and planning law.

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<sup>1</sup> The AFFH rule is published at 80 Fed. Reg. 42,272 and codified at 24 CFR Part 5, along with conforming amendments to Parts 91, 570, and 903. The effective date of the AFFH rule is August 17, 2015.

AB 686 does not ascribe a quantified meaning to the phrase throughout a community or communities.

## Assessment of Fair Housing Requirements

Appendix B presents an *Assessment of Fair Housing* for purposes of providing direction to the City on the goals, priorities and strategies it can adopt to affirmatively further fair housing (AFFH).

The Government Code requirements relating to affirmatively furthering fair housing and the assessment of fair housing are described below.

### Affirmatively Furthering Fair Housing/Assessment of Fair Housing

#### Government Code Section 8899.50

(a) For purposes of this section, the following terms have the following meanings:

(1) Affirmatively furthering fair housing|| means taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics. Specifically, affirmatively furthering fair housing means taking meaningful actions that, taken together, address significant disparities in housing needs and in access to opportunity, replacing segregated living patterns with truly integrated and balanced living patterns, transforming racially and ethnically concentrated areas of poverty into areas of opportunity, and fostering and maintaining compliance with civil rights and fair housing laws. The duty to affirmatively further fair housing extends to all of a public agency's activities and programs relating to housing and community development.

#### Government Code Section 65583(c)(9)(A) states:

Affirmatively further fair housing in accordance with Chapter 15 (commencing with Section 8899.50) of Division 1 of Title 2. The program shall include an assessment of fair housing in the jurisdiction that shall include all of the following components:

- (i) A summary of fair housing issues in the jurisdiction and an assessment of the jurisdiction's fair housing enforcement and fair housing outreach capacity.
- (ii) An analysis of available federal, state, and local data and knowledge to identify integration and segregation patterns and trends, racially or ethnically concentrated areas of poverty, disparities in access to opportunity, and disproportionate housing needs within the jurisdiction, including displacement risk.
- (iii) An assessment of the contributing factors for the fair housing issues identified under clause (ii).
- (iv) An identification of the jurisdiction's fair housing priorities and goals, giving highest priority to those factors identified in clause (iii) that limit or deny fair housing choice or access to opportunity, or negatively impact fair housing or civil rights compliance, and identifying the metrics and milestones for determining what fair housing results will be achieved.
- (v) Strategies and actions to implement those priorities and goals, which may include, but are not limited to, enhancing mobility strategies and encouraging development of new affordable housing in areas of opportunity, as well as place-based strategies to encourage community revitalization, including preservation of existing affordable housing, and protecting existing residents from displacement

The Assessment of Fair Housing presents an analysis of five potential issues:

- Integration and segregation patterns and trends
- Racially or ethnically concentrated areas of poverty
- Disparities in access to opportunity
- Disproportionate housing needs within the jurisdiction
- Displacement risk

Government Code Section (c)(9)(A) requires the analysis of fair housing issues within a jurisdiction. This focus is appropriate because it is the City's goals, priorities and strategies that will guide the actions to be taken to AFFH. The obstacles of comparing the city to a region are explained later in this Assessment of Fair Housing.

The fair housing analysis is hindered because the American Community Survey (ACS) does not produce data for each of the protected classes. For example, data are unavailable from the ACS regarding religious affiliation and the cost burdens experienced by sex of householder or by familial status.

The purpose of the analysis is to provide a basis to identify a —fair housing issue. For example, does segregation exist in the jurisdiction? Are there racially and ethnically concentrated areas of poverty in the jurisdiction?

If there are fair housing issues in the jurisdiction, then the assessment must identify and describe the factors that contribute to: 1) limiting or denying fair housing choice or access to opportunity and 2) negatively impact fair housing or civil rights compliance.

The jurisdiction then must identify for each contributing factor, the fair housing priorities and goals and the strategies to implement those priorities and goals. Government Code Section 65583(c)(9)(A)(v) provides examples of possible strategies and actions:

- Enhancing mobility strategies
- Encouraging development of new affordable housing in areas of opportunity
- Place-based strategies to encourage community revitalization
- Preservation of existing affordable housing
- Protecting existing residents from displacement

The strategies and actions become necessary when a fair housing issue is identified and the factors that contribute to that issue are known to some degree of certainty.

Government Code Section 8899.50(b) states:

In selecting meaningful actions to fulfill the obligation to affirmatively further fair housing, this section does not require a public agency to take, or prohibit a public agency from taking, any one particular action.

According to Government Code Section 8899.50(c):

This section shall be interpreted consistent with the Affirmatively Furthering Fair Housing Final Rule and accompanying commentary published by the United States Department of Housing and Urban

Development contained in Volume 80 of the Federal Register, Number 136, pages 42272 to 42371, inclusive, dated July 16, 2015. Subsequent amendment, suspension, or revocation of this Final Rule or its accompanying commentary by the federal government shall not impact the interpretation of this section.

In preparing the AFH, the program participants – primarily Community Development Block Grant (CDBG) entitlement communities – were advised by HUD to use several available resources, including the *AFFH Rule Guidebook*, which was made available to grantees on December 15, 2015.

## FAIR HOUSING PROTECTED CHARACTERISTICS AND PROTECTED CLASSES

A protected class is a group of people with a common characteristic who are legally protected from housing discrimination.

According to U.S. Department of Housing and Urban Development (HUD):

- Protected Characteristics are race, color, religion, sex, familial status, national origin, having a disability, and having a type of disability. (24 C.F.R. § 5.152)
- Protected Class means a group of persons who have the same protected characteristic; e.g., a group of persons who are of the same race are a protected class. Similarly, a person who has a mobility disability is a member of the protected class of persons with disabilities and a member of the protected class of persons with mobility disabilities. (24 C.F.R. § 5.152)

### Federal Protected Classes

- Race
- Color
- National Origin
- Disability: Mental and Physical
- Religion
- Sex
- Familial Status California Protected Classes
- Marital Status
- Ancestry
- Source of Income
- Sexual Orientation
- Age\*
- Gender Identity, Gender Expression
- Genetic Information
- Military or Veterans Status
- Primary Language\*
- Citizenship/Immigration Status\*

\*Covered under the Unruh Civil Rights Act, which applies to most housing accommodations in California.

The federal Fair Housing Act prohibits both intentional discrimination and policies and practices that discriminate against the seven protected classes/groups. According to HUD's Office of General Counsel

(OGC), people with limited English proficiency (LEP) are not a protected class under the Fair Housing Act. However, the OGC explains that there is a close link between LEP and certain racial and national origin groups.

Income, per se, is not a protected class. According to HUD:

...the Fair Housing Act does not prohibit discrimination on the basis of income or other characteristics not specified in the Act, and it is not HUD's intent to use the AFFH rule to expand the characteristics protected by the Act.

Source: Federal Register July 16, 2015, page 42283

## DEFINITIONS OF FAIR HOUSING PROTECTED CLASSES AND DISCRIMINATION EXAMPLES

### Race

The Fair Housing Act does not define race. Data on race is required for many federal programs and the Census Bureau collects race data in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB) and these data are based on self- identification. The racial categories included in the census form generally reflect a *social definition* of race recognized in this country, and are not an attempt to define race biologically, anthropologically or genetically. In addition, the Census Bureau recognizes that the categories of the race item include both racial and national origin or socio-cultural groups. Census 2010 and the American Community Survey provide for six race categories: White; Black, African American or Negro; American Indian or Alaska Native; Asian; Native Hawaiian or Other Pacific Islander; and Some Other Race.

Example: Discrimination against African Americans by a Caucasian apartment manager.

### Color

The Fair Housing Act does not define —color||. However, it most likely refers to the complexion of a person's skin color or pigmentation. The 2010 racial categories can be traced to Statistical Policy Directive No.15, promulgated by the OMB on May 12, 1977. —The four racial categories stipulated in the (1977) directive parallel the classic nineteenth-century color designations of black, white, red (American Indian or Alaska native), and yellow (Asian or Pacific Islander); there is no brown race in the American ethnocidal taxonomy. Victoria Hattam, —Ethnicity & the Boundaries of Race: Re-reading Directive 15, Daedalus, Winter 2005, page 63]

Example: Discrimination against a dark-skinned African American by a light-skinned African- American.

### National Origin

National origin means the geographic area in which a person was born or from which his or her ancestors came. The geographic area need not be a country for it to be considered someone's —national origin, but rather can be a region within a country, or a region that spans multiple countries. In general, national

origin discrimination can occur even if a defendant does not know, or is mistaken about, precisely from where the plaintiff originates.

Example: Discrimination against a Puerto Rican individual by a Mexican property owner.

## Disabled/Disability

The term “disability” means, with respect to an individual:

- A physical or mental impairment that substantially limits one or more major life activities of such individual;
- A record of such an impairment; or
- Being regarded as having such impairment.

Disability does not include current, illegal use of or addiction to a controlled substance (as defined in section 102 of the Controlled Substances Act (21 U.S.C. 802)).

Example: Not allowing a disabled individual to have a service animal in a renter’s apartment.

## Religion

“Religion” refers to all aspects of religious belief, observance, and practice. According to the United States Department of Justice (DOJ), this prohibition covers instances of overt discrimination against members of a particular religion as well as less direct actions, such as zoning ordinances designed to limit the use of private homes as places of worship.

Example: Discriminating against non-Catholics (Muslim, Buddhist, etc.) because of their religion.

## Sex

The protected group includes gender (male or female), gender identity, and gender expression. California’s Fair Employment and Housing Act defines “sex” as including, but not limited to, pregnancy, childbirth, medical conditions related to pregnancy or childbirth and a person’s gender, as defined in Section 422.56 of the Penal Code. Government Code Section 12926(p)

Example: A property manager refusing to rent an apartment to a female householder.

## Familial Status

“Familial Status” means one or more individuals (who have not attained the age of 18 years) being domiciled with--

- A parent or another person having legal custody of such individual or individuals; or
- The designee of such parent or other person having such custody, with the written permission of such parent or other person.

The protections afforded against discrimination on the basis of familial status shall apply to any person who is pregnant or is in the process of securing legal custody of any individual who has not attained the age of 18 years. (42 U.S.C. 3602(k))

Example: Forcing families with children to live on the first floor, or not renting to individuals with young children.

## DEMOGRAPHIC SUMMARY

The Demographic Summary contains data on the numbers of people and households who are members of six protected classes under the provisions of both federal and California law. The demographic summary establishes benchmarks that will enable the City to track trends as the American Community Survey is released each year.

### Race/Color Protected Class

#### Race and Ethnic Categories

Census 2010 and the 2015-2019 American Community Survey provide for six race categories:

- White Alone
- Black, African American or Negro Alone
- American Indian or Alaska Native Alone
- Asian Alone
- Native Hawaiian or Other Pacific Islander Alone
- Some Other Race Alone

Individuals who chose more than one of the six race categories are referred to as the *two or more races* population. All respondents who indicated more than one race can be collapsed into the *two or more races* category, which combined with the six *alone* categories, yields seven mutually exclusive categories. Thus, the six race *alone* categories and the *two or more races* category sum to the total population.

#### Definitions of Non-Minority and Minority Populations

The *non-minority* population includes White persons who are not of Hispanic or Latino origin (e.g., Mexican, Cuban, Puerto Rican). All other population groups comprise the minority population. The minority population is defined in the same way by the Office of Management and Budget (OMB), Federal Department of Transportation (DOT), Federal Financial Institutions Examination Council (FFIEC), and Council on Environmental Quality (CEQ - environmental justice guidelines).

The race and ethnic categories follow the OMB Policy Directive No. 15 (May 12, 1977) and the 1997 revisions. The OMB's efforts are to standardize the racial and ethnic categories so that federal government agencies can monitor discrimination, as required by the Civil Rights Act of 1964, the Voting Rights Act of 1965, the Fair Housing Act of 1968, the Equal Credit Opportunity Act of 1974, and the Home Mortgage Disclosure Act of 1975.

Source: Victoria Hattam, Ethnicity & the American Boundaries of Race: Rereading Directive 15, *Daedalus – Journal of the American Academy of the Arts & Sciences*, Winter 2005, pgs. 61-62

Ethnicity means being of Hispanic or Latino Origin or not being of such origin. Refer to the next page for definitions of race and Hispanic or Latino origin.

### Census Definitions of Race

**White.** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian.

**Black or African American.** A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black, African Am., or Negro" or report entries such as African American, Kenyan, Nigerian, or Haitian.

**American Indian or Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicate their race as "American Indian or Alaska Native" or report entries such as Navajo, Blackfeet, Inupiat, Yup'ik, or Central American Indian groups or South American Indian groups.

**Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes people who indicate their race as "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian" or provide other detailed Asian responses.

**Native Hawaiian or Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicate their race as "Native Hawaiian," "Guamanian or Chamorro," "Samoan," and "Other Pacific Islander" or provide other detailed Pacific Islander responses.

**Some Other Race.** Includes all other responses not included in the "White," "Black or African American," "American Indian or Alaska Native," "Asian," and "Native Hawaiian or Other Pacific Islander" race categories described above. Respondents reporting entries such as multiracial, mixed, interracial, or a Hispanic, Latino, or Spanish group (for example, Mexican, Puerto Rican, Cuban, or Spanish) in response to the race question are included in this category.

**Two or More Races.** People may choose to provide two or more races either by checking two or more race response check boxes, by providing multiple responses, or by some combination of check boxes and other responses. The race response categories shown on the questionnaire are collapsed into the five minimum race groups identified by OMB and the Census Bureau's "Some Other Race" category. For data product purposes, "Two or More Races" refers to combinations of two or more of the following race categories: White, Black or African American, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and Some Other Race.

There are 57 possible combinations involving the race categories shown above. Thus, according to this approach, a response of "White" and "Asian" was tallied as Two or More Races, while a response of "Japanese" and "Chinese" was not because "Japanese" and "Chinese" are both Asian responses.

### Census Definitions of Hispanic or Latino Origin

People who identify with the terms "Hispanic," "Latino," or "Spanish" are those who classify themselves in one of the specific Hispanic, Latino, or Spanish categories listed on the questionnaire ("Mexican," "Puerto Rican," or "Cuban") as well as those who indicate that they are "another Hispanic, Latino, or Spanish origin." People who do not identify with one of the specific origins listed on the questionnaire but indicate that they are "another Hispanic, Latino, or Spanish origin" are those whose origins are from Spain, the Spanish-speaking countries of Central or South America, or the Dominican Republic.

## Signal Hill's Population by Race and Ethnicity

Table B-1 shows the population growth by race and ethnicity between 2010 and 2015-2019. During this period, the Asian, White and Hispanic populations experience the largest numerical population gains.

**Table B-1: Population Growth by Race and Ethnicity: 2010 to 2015-2019**

Race/Ethnicity	2010	2015-2019	Increase/Decrease
Hispanic or Latino	3,501	3,671	170
Not Hispanic or Latino			
White Alone	2,990	3,347	357
Black or African American Alone	1,364	1,268	-96
American Indian and Alaska Native Alone	12	0	-12
Asian Alone	2,382	2,865	483
Native Hawaiian and Other Pacific Islander Alone	55	21	-34
Some Other Race Alone	111	18	-93
Two or More Races	285	322	37
<b>Total</b>	<b>10,700</b>	<b>11,512</b>	<b>812</b>

Sources: U.S. Census Bureau; 2010 Census, 2010 DP05Summary File 1, Table P9 Hispanic or Latino, and Not Hispanic or Latino Origin by Race

U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table B03002 Hispanic or Latino by Race

## Race of Hispanic or Latino and Not Hispanic or Latino Populations

Table B-2 shows that in 2015-2019; almost 3,700 persons identified themselves as being of Hispanic or Latino Origin. With respect to race –

- About 64% (2,349/3,671) of the Hispanic population said that their race was White Alone
- About 28% said they belonged to Some Other Race
- 5% identified themselves as having Two or More Races

The majority of Signal Hill's population is White because about two-thirds of the Hispanic population identifies with the White Alone race category,

**Table B-2: Race of Hispanic or Latino and Not Hispanic or Latino Populations: 2015-2019**

Race	Hispanic or Latino	Percent	Not Hispanic or Latino	Percent	Total	Percent
White Alone	2,349	41.2%	3,347	58.8%	5,696	49.5%
Black or African American Alone	19	1.5%	1,268	98.5%	1,287	11.2%
Asian Alone	45	1.5%	2,865	98.5%	2,910	25.3%
American Indian or Alaska Native Alone	8	100.0%	0	0.0%	8	-%
Native Hawaiian/Other Pacific Islander Alone	0	0.0%	21	100.0%	21	0.2%%

**Table B-2: Race of Hispanic or Latino and Not Hispanic or Latino Populations: 2015-2019**

Race	Hispanic or Latino	Percent	Not Hispanic or Latino	Percent	Total	Percent
Some Other Race Alone	1,042	98.3%	18	1.7%	1,060	9.2%
Two or More Races	208	39.2%	322	60.8%	530	4.6%
Total	3,671	31.9%	7,841		11,512	100.0%

Source: U.S. Census Bureau; American Community Survey. 2015-2019 5-Year Estimates, Table B03002: Hispanic or Latino Origin by Race

### Sex of Householder Protected Class

Federal and State fair housing laws prohibit discrimination based on a person's sex. The United States Department of Justice (DOJ) has stated:

The Fair Housing Act makes it unlawful to discriminate in housing on the basis of sex. In recent years, the Department's focus in this area has been to challenge sexual harassment in housing. Women, particularly those who are poor, and with limited housing options, often have little recourse but to tolerate the humiliation and degradation of sexual harassment or risk having their families and themselves removed from their homes.

In addition, pricing discrimination in mortgage lending may also adversely affect women, particularly minority women. This type of discrimination is unlawful under both the Fair Housing Act and the Equal Credit Opportunity Act. [Emphasis added]

Source: United States Department of Justice, Civil Rights Division, Housing and Civil Enforcement Section, The Fair Housing Act, July 25, 2008, pages 2 and 3

Table B-3 presents data on the number of householders by type. Female householders comprise approximately 12% of all householders (one of every eight). The largest numbers of householders are married couples (1,725) and householders living alone (1,652).

**Table B-3: Number of Households by Type: 2015-2019**

Household Type	Number	Percent
Married Couples	1,725	36.6%
Female Householders	571	12.1%
Male Householders	200	4.2%
Householder Living Alone	1,652	35.0%
Householder Living w/Others	571	12.1%
<b>Total</b>	<b>4,719</b>	<b>100.0%</b>

Source: U.S. Census Bureau; American Community Survey. 2015-2019 5-Year Estimates, Table S2501 Occupancy Characteristics

## National Origin/Ancestry Protected Class

The Fair Housing Act and California Fair Employment and Housing Act prohibit discrimination based upon national origin. According to the United States Department of Justice, such discrimination can be based either upon the country of an individual's birth or where his or her ancestors originated.

### Foreign Born Population by Region of Birth

The foreign-born population includes anyone who is not a U.S. citizen or a U.S. national at birth, including respondents who indicated they were a U.S. citizen by naturalization or not a U.S. citizen. Table B-4 indicates that Signal Hill's foreign born population consists of approximately 3,100 persons. Of this total number about 60% were born in Asia and 33% were born in Latin America.

### Origins of the Hispanic or Latino Population

Almost 3,700 Hispanic or Latino persons reside in Signal Hill. Table B-5 shows that Mexico is the origin of almost 85% of all Hispanic persons.

### Origins of Asian Persons

Table B-6 shows the origins of the Asian population. Origin information is unknown for almost 45% of the population. Almost 30% of the Asian population is of Filipino population.

**Table B-4: Foreign Born Population by Region of Birth: 2015-2019**

Region	Number	Percent
Europe	160	5.1%
Asia	1,906	60.5%
Africa	21	0.7%
Oceania	0	0.0%
Latin America	1,033	32.8%
North America	28	0.9%
Total	3,148	100.0%

Source: U.S. Census Bureau; American Community Survey. 2015-2019 5-Year Estimates, Table DP02 Selected Social Characteristics in Signal Hill

**Table B-5: Persons of Hispanic Origin: 2010 and 2015-2019**

Hispanic Origin	2015-2019	
	Number	Percent
Mexican	3,103	84.5%
Puerto Rican	98	2.7%
Cuban	0	0.0%
Other Spanish/Hispanic	470	12.8%
<b>Total</b>	<b>3,671</b>	<b>100.0%</b>

Source: U.S. Census Bureau; 2010 Census, Summary File 1, QT-P3 Race and Hispanic or Latino Origin  
U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table DP05: ACS  
Demographic and Housing Characteristics

**Table B-6: Origins of Asian Population: 2015-2019**

Origin	Number	Percent
Asian Indian	84	2.9%
Chinese	297	10.2%
Filipino	845	29.0%
Japanese	111	3.8%
Korean	201	6.9%
Vietnamese	76	2.6%
Other Asian	1,296	44.6%
<b>Total</b>	<b>2,910</b>	<b>100.0%</b>

Source: U.S. Census Bureau; American Community Survey. 2015-2019 5-Year

Estimates, Table DP02 Selected Social Characteristics in Signal Hill

## Familial Status Protected Class

### Background

The Fair Housing Amendments Act of 1988 prohibits discriminatory housing practices based on familial status. In most instances, according to the United States Department of Justice, the Act prohibits a housing provider from refusing to rent or sell to families with children. However, housing may be designated as housing for older persons (55 years + of age). This type of housing, which meets the standards set forth in the Housing for Older Persons Act of 1995, may operate as -senior housing|| and exclude families with children.

The Act protects families with children less than 18 years of age, pregnant women, or families in the process of securing custody of a child under 18 years of age. The Department of Justice has stated:

In addition to prohibiting the outright denial of housing to families with children, the Act also prevents housing providers from imposing any special requirements or conditions on tenants with children. For example, landlords may not locate families with children in any single portion of a complex, place an unreasonable restriction on the number of persons who may reside in a dwelling, or limit their access to recreational services provided to other tenants.

Source: United States Department of Justice, Civil Rights Division, Housing and Civil Enforcement Section, *The Fair Housing Act*, July 25, 2008, page 3

### Population Characteristics

Approximately 20% of all households have children. The majority of families with children are married couples (574) and female householders (163). Refer to Table B-7.

Non-family households do not have children. A non-family household is a householder *living alone* or with *nonrelatives* only. Unmarried couple households, whether opposite-sex or same-sex, with no relatives of the householder present are tabulated in nonfamily households.

**Table B-7: Households with Children: 2015-2019**

<b>Household Type</b>	<b>Households</b>	<b>With Children</b>	<b>Percent With Children</b>
Married Couples	1,725	574	33.3%
Cohabiting Couples	499	144	28.9%
Female Householders, No Husband Present	1,426	163	11.4%
Male Householders, No Wife Present	1,069	31	2.9%
<b>Total</b>	<b>4,719</b>	<b>912</b>	<b>19.3%</b>

Source: U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table DP05 Demographic and Housing Characteristics

## Handicap/Disability Protected Class

### Background

The Fair Housing Act prohibits discriminatory housing practices based on handicap/disability. Among other prohibitions, the Act is intended to prohibit the application of special restrictive covenants and conditional or special use permits that have the effect of limiting the ability of such individuals to live in the residence of their choice. Fair housing laws, therefore, make it illegal to deny a housing opportunity on the basis of disabilities.

In addition, the law prohibits applying one standard to one class of individuals while applying a different standard to another class of individuals. For example, it would be illegal to ask a disabled individual applying for an apartment to provide a credit report if non-disabled applicants do not have to provide one.

Housing opportunities for disabled persons are impeded by practices in both the private and public sectors. For instance, denied reasonable modification/accommodation is often cited as an alleged act in housing discrimination complaints. Additionally, apartment rental ads often state -no pets allowed, even though disabled persons may have service or companion animals. In the public sector, housing opportunities can be impeded because a community has not adopted a reasonable accommodation procedure, or if adopted has not made the procedure widely known in the community.

The United States Department of Justice has indicated a major focus of its efforts is on public sector impediments that may restrict housing opportunities for disabled persons. The Department has stated:

The Division's enforcement of the Fair Housing Act's protections for persons with disabilities has concentrated on two major areas. One is insuring that zoning and other regulations concerning land use are not employed to hinder the residential choices of these individuals, including unnecessarily restricting communal, or congregate, residential arrangements, such as group homes. The second area is insuring that newly constructed multifamily housing is built in accordance with the Fair Housing Act's accessibility requirements so that it is accessible to and usable by people with disabilities, and, in particular, those who use wheelchairs.

Source: United States Department of Justice, Civil Rights Division, Housing and Civil Enforcement Section, *The Fair Housing Act*, July 25, 2008, page 4

## Population and Household Characteristics

Almost 800 residents have one or more disability, a number that represents almost 7% of Signal Hill's total population. The disability prevalence rate, or percent disabled, steadily increases with age. More than 40% of the senior population 75 years old or older has a disability. Table B-8 presents the number and percent of disabled persons by age group.

**Table B-8: Disability Status of Civilian Non-institutionalized Population by Age Group: 2015-2019**

Age Group	Disabled Population	Total Population	Percent Disabled
< 5 years	0	736	0.0%
5-17 years	2	1,419	0.1%
18-34 years	96	2,964	3.2%
35-64 years	376	4,854	7.7%
65-74 years	112	984	11.4%
75 years +	202	466	43.3%
<b>Total</b>	<b>788</b>	<b>11,423</b>	<b>6.9%</b>

Source: 2015-2019 American Community Survey 5-Year Estimates, Table B18101, Sex by Age by Disability Status

Table B-9 shows that almost 700 households have one or more member with a disability, a number that equals 15% of all households. The member with a disability could be the head of household, a spouse, a child or other related or unrelated person living in the housing unit.

**Table B-9: Disabled Householders: 2015-2019**

Household Disability Status	Number	Percent
Households with one or more persons with a disability	692	14.7%
Households with no persons with a disability	4,027	85.3%
<b>Total</b>	<b>4,719</b>	<b>100.0%</b>

Source: 2018 American Community Survey 1-Year Estimates, Table B22010, Receipt of Food Stamps/SNAP in the Past 12 Months by Disability Status for Households

## Limited English Proficiency (LEP) Protected Class

### Background

LEP refers to a person's limited ability to read, write, speak, or understand English. Individuals who are LEP are not a protected class under the federal Fair Housing Act. Nonetheless, the Act prohibits housing providers from using LEP selectively based on a protected class or as a pretext for discrimination because of a protected class. The Act also prohibits housing providers from using LEP in a way that causes an unjustified discriminatory effect.

### LEP Households

A -Limited English-speaking household|| is one in which no member 14 years old and over (1) speaks only English at home or (2) speaks a language other than English at home and speaks English -Very well.

Respondents were asked to indicate their English-speaking ability based on one of the following categories: -Very well, Well, -Not well, or -Not at all. Those who answered -Well, -Not well, or -Not at all are sometimes referred to as -Less than very well.

After data are collected for each person in the household, the limited English-speaking household variable is calculated by checking if all people 14 years old and older speak a language other than English. If so, the calculation checks the English-speaking ability responses to see if all people 14 years old and older speak English -Less than very well. If all household members 14 and over speak a language other than English and speak English -Less than very well, the household is considered part of this group that may be in need of English language assistance.

There are approximately 200 limited English speaking households residing in Signal Hill. The large majority of limited English-speaking households speak Spanish or Asian and Pacific Island languages.

Refer to Table B-10 for data on the number and percentage of limited English-speaking households.

## Primary Language

In California, -primary language is a protected class. Primary language means that people whose first language is not English are protected from housing discrimination. Tenants have the right to use their preferred language and private housing providers do not have to provide a translator, but they must speak with a translator if the tenant has one. Tenants whose first language is not English should not be treated differently, harassed, or refused housing/services.

**Table B-10: Limited English-Speaking Households: 2015-2019**

Households Speaking	Limited English Speaking Households	Percent of all Limited English-Speaking Households
Spanish	130	64.4%
Other Indo-European Languages	0	3.9%
Asian and Pacific Island Languages	72	35.6%
Other Languages	0	0.0%
<b>Total</b>	<b>202</b>	<b>100.0%</b>

Source: U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table

S1602, Limited English Speaking Households

DP02 Selected Social Characteristics

## Source of Income Discrimination

The California Fair Employment and Housing Act (FEHA) protects people from housing discrimination. The latest amendment to the law regarding source of income protections adds people using a federal, state, or local housing subsidy to this list of protected groups. This means, beginning on January 1, 2020, housing providers, such as landlords, cannot refuse to rent to someone, or otherwise discriminate against them, because they have a housing subsidy, such as a Section 8 Housing Choice Voucher, which helps them to afford their rent.

The new law prohibits discrimination against any applicant because the applicant is using a federal, state, or local housing subsidy to assist with paying rent. Section 8 Housing Choice Vouchers, the HUD-VASH program, Homelessness Prevention and Rapid Re-Housing Programs, Housing Opportunities for Persons with AIDS and security deposit assistance programs, among others, all fall within the scope of the new law's protection. This list of protected subsidies also includes locally funded subsidy programs created by cities, counties and public agencies to address growing homelessness.

## SEGREGATION/INTEGRATION ANALYSIS

For the purposes of the AFFH rule, segregation means a condition in which there is a high concentration of persons of a particular race, color, religion, sex, familial status, national origin, or having a disability or a type of disability in a particular geographic area when compared to a broader geographic area. 24 C.F.R. § 5.152

For the purposes of the AFFH rule, integration means a condition in which there is not a high concentration of persons of a particular race, color, religion, sex, familial status, national origin, or having a disability or a type of disability in a particular geographic area when compared to a broader geographic area. 24 C.F.R. § 5.152

The AFFH rule does not define the meaning of "High" or "Not a High" concentration.

### Dissimilarity Index Measures Segregation/Integration

The Dissimilarity Index, according to HUD's *Assessment of Fair Housing Tool for Local Governments*, measures the degree to which two groups are evenly distributed across a geographic area and is a commonly used measure for assessing residential segregation between two groups. The analysis is typically conducted for a city or county based on the racial and ethnic distribution of the population within the census tracts that comprise the jurisdiction. A census is a standardized geographic unit with a population of approximately 4,000. Census tracts provide a standardized geographic unit to report census data and compare change over time. The boundaries of census tracts remain the same from one census to the next and only change if there is a major increase or decrease in the population.

The values of the Dissimilarity Index range from 0 to 100. An index value of 0 indicates that a city is completely integrated when measuring for example the distributions of Whites and Blacks, while an index value of 100 indicates the city is completely segregated. The value of the Dissimilarity Index is based on the proportion of the two groups within each census tract relative to the distribution of the two groups in the city. It is not based on the proportion of the two groups within the city. Table B-11 provides an example that helps to explain the DI.

**Table B-11: Dissimilarity Index Example**

Census Tract	City A		City B		City C	
	White	Black	White	Black	White	Black
100	3,900	100	0	200	0	200
101	3,900	100	0	200	3,900	100
102	3,900	100	7,800	0	3,900	100
103	3,900	100	7,800	0	7,800	0

<b>Total</b>	<b>15,600</b>	<b>400</b>	<b>15,600</b>	<b>400</b>	<b>15,600</b>	<b>400</b>
Dissimilarity Index		0		100		50

In each of these hypothetical cities, there are 15,600 Whites (97.5%) and 400 Blacks (2.5%). Because of the small proportion (2.5%) of Blacks, these cities could be labelled as segregated. However, the Dissimilarity Index for these cities ranges from 0 to 100.

The difference in the values of the Dissimilarity Index is based on the distribution of the White and Black populations within each of the census tracts. In City A with a Dissimilarity Index of 0, the proportion of Whites and Blacks in each census tract is the same. In City B with a Dissimilarity Index of 100, all the Whites are in two census tracts and all the Blacks are in two census tracts. In City C with a Dissimilarity Index of 50, there is one census tract that is exclusively Black, one census tract that is exclusively White, and two tracts where the proportion of Blacks to White is the same and is relative to the City's proportion of the two groups.

HUD suggests that a Dissimilarity Index value of less than 40 generally indicates low segregation, while values between 40 and 54 generally indicates moderate segregation, and values between 55 and 100 generally indicates a high level of segregation, as shown in Table B-12.

**Table B-12: Levels of Segregation**

Dissimilarity Index Value	Level of Segregation
< 40	Low Segregation
40 - 54	Moderate Segregation
> 54	High Segregation

## Regional Dissimilarity Indices

The City of Signal Hill is located in the Los Angeles-Long Beach-Anaheim, CA region which includes Los Angeles and Orange Counties. Through the 1990, 2000 and 2010 period, the Region has had high levels of segregation among the non-White/White, Black/White, and Hispanic/White populations.

**Table B-13: Los Angeles-Long Beach-Anaheim Region Dissimilarity Indices: 1990, 2000, and 2010**

Racial/Ethnic Dissimilarity Index	1990	2000	2010
Non-White/White	55.32	55.50	54.64
Black/White	72.75	68.12	65.22
Hispanic/White	60.12	62.44	62.15
Asian or Pacific Islander/White	43.46	46.02	45.77

Source: Adapted from HUD Table 3, Racial/Ethnic Dissimilarity Trends

## City of Signal Hill Dissimilarity Index

Based on the 2010 Census data, Brown University determined the following index values:

- White-Black/Black White 14.2
- White-Hispanic/Hispanic-White 22.5

▪ White-Asian/Asian-White	8.5
▪ Black-Hispanic/Hispanic-Black	8.7
▪ Black-Asian/Asian-Black	5.9
▪ Hispanic-Asian/Asian-Hispanic	14.

All of the City's index values demonstrate a low level of segregation particularly compared to the region.

It is anticipated that the 2015-2019 ACS data would also demonstrate a low level of segregation because the change in the racial/ethnic composition of the City since 2010 has not been significant.

Table B-14 shows the percentage distributions of the population by race and ethnicity in 2010 and 2015-2019.

**Table B-14: Population by Race and Ethnicity: 2010-2019**

Race/Ethnicity	2010	2015-2019
Non-Hispanic White	30.3%	29.1%
Non-Hispanic Black	14.3%	11.0%
Hispanic	31.5%	31.9%
Asian	23.0%	24.9%
Other	0.9%	3.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

Source: U.S. Census 2010 and American Community 5- Year Estimates 2014-2018

## Households with a Disabled Member

Table B-15 shows the number in each census tract of households with a disabled member. The table also shows the number of households living in each census tract. Columns 3 and 4 show that the percentage distributions of households with a disabled member correspond fairly closely with the percentages of all households. For example, 55.1% of all households with a disabled member live in census tract 5734.02. This percentage is similar to the 58.9% of all households in the City living in that same census tract. The data demonstrate that there is no concentration in terms of where households with a disabled member live in the City.

At a regional level, Signal Hill is like the rest of the county in that all the census tracts have 10 percent or less of their population living with a disability. The areas with a slightly higher proportion of residents with disabilities is in the northern part of the City (which still has a lower proportion than most parts of the County at 10.10%).

The vast majority of disabled persons live in separate living quarters (a housing unit) not in a group quarter setting (nursing home). There are no licensed group homes located in Signal Hill. This means that an Adult Residential Facility (ARF) is not located within the city limits. An ARF is a residential home for adults 18 to 59 with mental health care needs or who have physical or developmental disabilities and require or prefer assistance with care and supervision.

**Table B-15: Segregation/Integration Analysis of Households with a Disabled Member**

Census Tract	Households w/ Disabled Member	All Households	Census Tract Percentage <sup>1</sup>	Citywide Percentage <sup>2</sup>
5734.01	123	645	13.6%	17.5%
5734.02	413	2,614	55.1%	58.9%
5734.03	165	1484	31.3%	23.6%
Total	701	4,743	100.0%	

<sup>1</sup>Census tract total households as a percentage of all households within City (645/4,743)

<sup>2</sup>Households with disabled member as % of all households with disabled member (123/701)

Source: 2015-2019 American Community Survey 5-Year Estimates, Table B22010, Receipt of Food Stamps/SNAP in the Past 12 Months by Disability Status for Households

One skilled nursing facility (SNF) with a capacity of 59 beds is located in Signal Hill. Most of the residents of the SNF probably have one or more disability.

Skilled nursing facilities provide a wide range of health and personal care services. Some people stay at a nursing home for a short time after being in the hospital. After they recover, they go home. However, most nursing home residents live there permanently because they have ongoing physical or mental conditions that require constant care and supervision.

The Courtyard Care Center provides to residents rehabilitation services, long-term and end-of-life care, social services, and nursing services.

## Households with Children

Table B-16 shows the number of households with children in each census tract. The table also shows the total number of households living in each census tract. Column 3 shows the percentage distribution of households with children by census tract. They correspond fairly closely with the percentages of all households. For example, 50.7% of all households with children live in census tract 5734.02. That percentage is similar to the 58.9% of all households in the City living in that same census tract. The data demonstrate that there is no concentration in terms of where households with children live in the City. Compared with the region, The City has a lower proportion of families with children. In Los Angeles County, 28.3% of households are made up of families with children. In Signal Hill that percentage is 19.3%. The area with a slightly higher proportion of households is in the northern part of the City (which has a slightly higher proportion than most parts of the County at 31.5%).

**Table B-16: Segregation/Integration Analysis of Households with Children**

Census Tract	Households w/Children	All Households	Census Tract Percentage <sup>1</sup>	Citywide Percentage <sup>2</sup>
5734.01	203	645	13.6%	22.3%
5734.02	462	2,614	55.1%	50.7%
5734.03	247	1484	31.3%	27.0%
Total	912	4,743	100.0%	

<sup>1</sup>Census tract total households as a percentage of all households within City (645/4,743)

**Table B-16: Segregation/Integration Analysis of Households with Children**

Census Tract	Households w/Children	All Households	Census Tract Percentage <sup>1</sup>	Citywide Percentage <sup>2</sup>
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<sup>1</sup>Households with children as % of all households with children (203/912)

Source: U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table DP05 Demographic and Housing Characteristics

## Income Level

According to the 2019 American Community Survey, the median household income for Signal Hill was \$75,808, which is higher than the Los Angeles County median household income of \$68,044. Median household income differs by tenure; owner households earn \$112,615 versus \$52,601 for renter households. This stark contrast can be seen in all three Census tracts in the City (Table B-17)

Census data estimates that 16.4% of residents live in poverty, as defined by federal guidelines. This proportion is slightly higher than Los Angeles County where 14.9 percent of residents live in poverty. Based on the difference between the median incomes for owner versus renter households, it can be assumed that renter households make up a large proportion of households living in poverty. Table B-17 shows that Tract 5734.02, the central and largest part of the City, had the lowest median household income and the largest proportion of persons living in poverty. The other two Census tracts had median household incomes close to or greater than the City median income of \$75,808. Compared with the region, the City has lower levels of persons living in poverty. Pockets of poverty concentrations can be seen south of Signal Hill within the City of Long Beach and to the north in parts of central Los Angeles.

**Table B-17: Income and Poverty**

Census Tract	Total Households (% of all City HHs)	Median Household Income	Median Income Owner Households	Median Income Renter Households	% of Persons Living in Poverty
5734.01	645 (13.6%)	\$75,040	\$133,194	\$55,551	13%
5734.02	2,614 (55.1%)	\$66,508	\$109,605	\$49,007	17.6%
5734.03	1,484 (31.3%)	\$101,351	\$111,058	\$49,976	16.2%
Total (City)	4,743 (100%)	\$75,808	\$112,615	\$52,601	16.4%

Source: U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table S1903 Median Income In The Past 12 Months (In 2019 Inflation-Adjusted Dollars); S1701 Poverty Status In The Past 12 Months

## RACIALLY/ETHNICALLY CONCENTRATED AREAS OF POVERTY AND AFFLUENCE

### Background

To assist communities in identifying racially or ethnically concentrated areas of poverty (R/ECAPs), HUD has developed a census tract-based definition of R/ECAPs. The definition involves a racial/ethnic concentration threshold and a poverty test. The racial/ethnic concentration threshold is straightforward: R/ECAPs must have a non-White population of 50% or more. Regarding the poverty threshold, a neighborhood can be an R/ECAP if it has a poverty rate that exceeds 40% or is three or more times the average tract poverty rate for the metropolitan/micropolitan area, whichever threshold is lower. Census

tracts with this extreme poverty that satisfy the racial/ethnic concentration threshold are deemed by HUD to be R/ECAPs.

Racially or Ethnically Concentrated Areas of Affluence (RCAAs) are generally understood to be neighborhoods in which there are both high concentrations of non-Hispanic White households and high household income rates.

## Analysis

HUD explains the importance of the R/ECAP analysis in the following terms:

A large body of research has consistently found that the problems associated with segregation are greatly exacerbated when combined with concentrated poverty. Neighborhoods of concentrated poverty may isolate residents from the resources and networks needed. Concentrated poverty has also been found to have a long-term effect on outcomes for children growing up in these neighborhoods related to a variety of indicators, including crime, health and education and future employment and lifetime earnings. An R/ECAP analysis is consistent with addressing concerns raised in the legislative history of the Fair Housing Act. The 1968 Kerner Commission on Civil Disorders acknowledged

There are no R/ECAPs located in Signal Hill. The three census tracts have minority populations exceeding 50%. However, none of the census tracts have a poverty rate that exceeds 18%, a poverty rate that is significantly below the R/ECAP threshold of 40%. Thus, the existence of an R/ECAP in the City is not a fair housing issue. Refer to Table B-18. The closest R/ECAPs are just south of the City within the City of Long Beach. This finding is supported by the HCD AFFH data viewer. Between 2010 and 2018, the City's level of diversity has remained unchanged in most areas and higher in a few areas of the City (using the U.S. Census Diversity Index in the HCD AFFH viewer). The surrounding South Bay region has also remained unchanged or become more diverse according to the same data source.

**Table B-18: R/ECAP Analysis Poverty Rates and Percent Minority by Census Tract: 2015-2019**

Census Tract	Total Population for Whom Poverty Status is Determined	Number Below the Poverty Level	Percent Below the Poverty Level	Percent Minority	Median Income
5734.01	1,642	214	13.0%	74.4%	\$75,040
5734.02	6,334	1,115	17.6%	73.5%	\$66,508
5734.03	3,519	571	16.2%	64.3%	\$101,351
Total	11,495	1,900	16.5%	71.0%	\$75,808

Source: U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table S17001: Poverty Status in the Past 12 Months

In Signal Hill, one tract (5734.03) has the highest median household income and the lowest proportion of minority residents (63.3%). This same tract also has the lowest proportion of low- and moderate-income households (as calculated by HUD in the HCD AFFH viewer). Nonetheless there are no racially or ethnically concentrated areas of affluence as the three census tracts have minority populations exceeding 64%. Between 2010 and 2018, the City's level of diversity has remained unchanged in most areas and higher in a few areas of the City (using the U.S. Census Diversity Index in the HCD AFFH viewer). The surrounding South Bay region has also remained unchanged or become more diverse according to the same data

source. As a result, no racially or ethnically concentrated areas of affluence have been created over that time.

## DISPARITIES IN REGIONAL ACCESS TO OPPORTUNITY

### HUD's CBSA "Region"

The HUD Index of Dissimilarity data and access to opportunity indicators define a Region based on the United States Office of Management and Budget (OMB) Core Based Statistical Areas (CBSAs) definition. The OMB defines a Core Based Statistical Area as one or more adjacent counties or county equivalents that have at least one urban area of at least 10,000 people plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

The Region, for purposes of HUD's data, encompasses all the cities and unincorporated communities located in Los Angeles and Orange Counties.

### HUD Access to Opportunity Data

HUD used a two-stage process for developing the data needed to analyze disparities in access to opportunity. The first stage involves quantifying the degree to which a neighborhood offers features commonly viewed as important opportunity indicators. In the second stage, HUD compares these rankings across people in particular racial and economic subgroups to characterize disparities in access to opportunities. To focus the analysis, HUD developed methods to quantify a selected number of the important opportunity indicators in every neighborhood. These dimensions were selected because existing research suggests they have a bearing on a range of individual outcomes.

Invariably, these opportunity indicators do not capture all that is encompassed in an individual's or a family's access to opportunity. In quantifying opportunity indicators, HUD is quantifying features of neighborhoods for the purpose of assessing whether significant disparities exist in the access or exposure of particular groups to these quality of life factors. While these important dimensions are identified by research as important to quality of life, the measures are not without limitations. HUD constrained the scope of HUD-provided data to those that are closely linked to neighborhood geographies and could be measured consistently at small area levels across the country. For example, HUD's measure of school performance only reflects elementary school proficiency. It does not capture academic achievement for higher grades of schooling, which is important to a community's well-being, but may not be as geographically tied to individual neighborhoods as elementary schools.

### Description of Opportunity Indicators

#### Low Poverty Index

The low poverty index captures poverty in a given neighborhood. The index is based on the poverty rate and the census tract level. Values are inverted and percentile ranked nationally. The resulting values range from 0 to 100. The higher the score, the less exposure to poverty in a neighborhood.

## School Proficiency Index

The school proficiency index uses school-level data on the performance of 4th grade students on state exams as a means to identify the neighborhoods having high or low performing elementary schools. The school proficiency index measures the percent of 4th grade students proficient in reading and math on state test scores for up to three schools within 1.5 miles of a census tract's block-group's centroid. The source of the HUD school data is the Great Schools Rating. Values are percentile ranked and range from 0 to 100. The higher the score, the higher the school system quality is in a neighborhood.

## Jobs Proximity Index

The Jobs Proximity Index quantifies the accessibility of a given neighborhood as a function of its distance to all job locations in a CBSA, with the larger employment centers weighted more heavily. In effect, the index measures the physical distances between place of residence and location of jobs. The job locations are positively weighted by the size of the employment and inversely weighted by the labor supply residing in that location. Values are percentile ranked at the CBSA level with values ranging from 0 to 100. The higher the index value, the better the access to employment opportunities for the residents in a neighborhood.

## Labor Market Engagement Index

The Labor Market Engagement Index is based on three factors: unemployment rate, labor force participation rate and educational attainment (the percent of the population with a bachelor's degree or higher). Values are percentile ranked nationally and range from 0 to 100 with the higher the score the higher the labor force participation and human capital in a neighborhood.

## Low Transportation Cost Index

This index is based on estimates of transportation costs for a family that meets the following description: a 3-person single-parent family with income at 50% of the median income for renters for the region (i.e. CBSA). Transportation costs are expressed as a percent of income for renters. Values range from 0 to 100. Higher values mean lower transportation costs in that neighborhood. Transportation costs may be low for a variety of reasons, including greater access to public transportation and the density of homes, services, and jobs in the neighborhood and surrounding community.

## Transit Trips Index

This index is based on estimates of transit trips taken by a family that meets the following description: a 3-person single-parent family with income at 50% of the median income for renters for the Region. Annual transit trips are modeled for renters. Index values range from 0 to 100. Higher scores indicate that residents in the neighborhood/census tract are more likely to utilize public transit. The index controls for income such that a higher index value will often reflect better access to public transit.

## Environmental Health Index

The environmental health index summarizes potential exposure to harmful toxins at the neighborhood level (census tracts). This index combines standardized EPA estimates of air quality carcinogenic,

respiratory and neurological hazards. Values range from 0 to 100. The higher the value, the better is the environmental quality of a neighborhood.

## **Analysis of CBSA Regional Access to Opportunity/Los Angeles-Long Beach-Anaheim CA Region and Local Opportunity Access**

Table B-18 provides the score for each of the seven indicators for the total regional population and the population with incomes below the federal poverty line by race and ethnicity. It is important to remember that the higher the score the more access to opportunity – a score of 65 compared to 50 demonstrates, for example, better access to public transit,

The values of the indices are best understood as an —interval|| level of measurement, similar to a thermometer. It can be said that 90 degrees is hotter than 45 degrees but not twice as hot. A—ratio|| level of measurement which has a true zero such as pounds is needed so it can be said that 90 pounds is twice the weight of 45 pounds.

The discussion below also addresses opportunity access in more depth regarding education, environmental, transportation, and economic factors in Signal Hill.

### **Low Poverty**

As expected, all racial/ethnic populations with incomes below the poverty line are more exposed to poverty than the total regional population. Signal Hill's populations experience far less exposure to poverty because the neighborhood poverty rates range between 13% and 17%.

### **School Proficiency**

Also as expected all racial and ethnic populations below the federal poverty line in the region live in neighborhoods with poor performing schools compared to the total regional population. In fact, the neighborhoods where income-poor Black Non-Hispanic and Hispanic households live have particularly low scores.

Students in Signal Hill attend schools that are in the Long Beach Unified Schools District and would attend Signal Hill or Alvarado Elementary School, Jessie Nelson Academy or Jefferson Leadership Academies Middle Schools, and Polytechnic High School. For the 2022 school year, there are 86 public schools serving 74,407 students in Long Beach Unified School District. This district's average testing ranking is 7/10, which is in the top 50% of public schools in California ([publicschoolreview.com](http://publicschoolreview.com)). Minority enrollment is 87% of the student body (majority Hispanic), which is more than the California public school average of 77% (majority Hispanic).

Great Schools, which is HUD's data source, shows that in Signal Hill, students have access to schools that perform above the state and national averages.

- Signal Hill Elementary ranks as above average with an 8 rating on a scale of 1-10. Students here are making above average year- over-year academic improvement. This school has above average results in how well it's serving disadvantaged students and students perform above average on state tests. Generally, school proficiency exceeds state averages in both math and English tests.

- Alvarado Elementary ranks as above average with an 8 rating on a scale of 1-10. Students here are making strong progress with high test scores means students have strong academic skills and are making bigger gains than their peers at other schools in the state.
- Nelson Middle School ranks as average with a 6 rating on a scale of 1-10. Generally, school proficiency on English and math tests exceeds state averages.
- Polytechnic High School: as above average with a 6 rating on a scale of 1-10. The 4-year graduation rate of 94% is greater than the State average of 85%. In addition, 64% of Poly graduates meet the UC/CSU entrance requirements compared to a state average of 51%.

Because of the City's small size (2.2 square miles), education opportunity access does not differ across the City and the school district has a process in place to accommodate families wishing to move students. Generally speaking, schools within and near the City have above average rankings meaning that Signal Hill families and students have access to a variety of higher-ranking schools. Students who reside in the LBUSD boundaries are assigned a neighborhood school based on their home address, but families have the option to have their children attend a school other than their neighborhood school through the Districtwide School of Choice process dependent on actual spaces available at an individual school site at each grade level. The student selection is conducted at school sites through a district process that includes a standard timeline and random selection of received applications based upon space availability.

### Labor Market Engagement and Job Proximity

As explained earlier, the Labor Market Engagement Index is based on three factors: unemployment rate, labor force participation rate and educational attainment (the percent of the population with a bachelor's degree or higher).

The labor market scores are generally low as only two population groups exceed a score of 50 or more for the total regional population and the population with incomes below the federal poverty line.

In Signal Hill, on a census tract basis, 90.6% to 95.2% of the population is employed in the civilian labor forces or armed forces. Again, on a census tract basis, 33.7% to 62.7% of the adult population hold a bachelor's degree or higher.

Local economic characteristics impact local housing needs, even though these characteristics may not be directly related to fair housing. These economic characteristics include the types of jobs available within the municipality, the way residents access jobs (e.g., auto, transit, etc.), the types of occupations held by residents, and their household income. In general, Signal Hill residents work in higher paying industries, have lower unemployment rates, and have good access to jobs. According to SCAG's Pre-certified Local Housing Data (2021), Signal Hill has 6,113 workers living within its borders who work across 13 major industrial sectors. The most prevalent industry is Education & Social Services with 1,472 employees (24.1% of total) and the second most prevalent industry is Professional Services with 908 employees (14.9% of total). See Appendix A for detailed employment information. Employment characteristics are important as they have a direct relationship with income. In Signal Hill, the top industries that employ residents have higher earnings. The top three industries which employ more than half of residents (Education/Social Services, Professional Services, and Manufacturing) pay just below or above the median earnings. Workers in these three industries have median earnings of 98%, 103%, and 133% of the overall median earnings of all Signal Hill residents (\$47,605) respectively. In comparison, the three industries with the lowest earnings (Retail Trade, Construction, and Other Services) only employ 18.5% of employed residents. In terms of unemployment, November/December 2021 unemployment data from the State Employment

Development Department reported that Los Angeles County had an unemployment rate of 7.1% while the State of California had an unemployment rate of 5.4%. Signal Hill had a much lower unemployment rate than the county and slightly higher than the state (at 5.3%). The City also had much level of unemployment compared with neighboring cities such as Long Beach (7.1%), Carson (7.2%), Compton (9.3%), Paramount (7.1%) and Bellflower (7.4%). Unemployment in Signal Hill was only higher than in the City of Lakewood (4.9%).

### Transit/Low Transportation Cost

For both indices, the scores of the population below the federal poverty line are higher than the regional population. The scores demonstrate closer proximity and use of public transit.

Almost the entire City is located within a High-Quality Transit Corridor. There also are major transit stops located within Signal Hill.

Los Angeles County residents in urban and suburban areas generally enjoy superior access to transportation infrastructure. The County is also traversed by numerous major freeways within its boundaries (including Interstates 405, 710 and 605 which are either in close proximity or intersect with Signal hill). Proximity to these highways allows access to employment and other activity centers in Downtown Los Angeles, West Los Angeles, and Orange County. Signal Hill has access to 10 bus routes provided by Long Beach Transit. The bus lines run along every major street within and around the City's boundary. The western edge of the City is less than half a mile from the METRO (Blue) Line, specifically its Willow Street Station. The A (Blue) Line allows for access north to a variety of regional rail lines. Residents in Signal Hill enjoy superior transportation access. The City scored 8.0 in the AllTransit Performance Score (Center for Neighborhood Technology 2019, AllTransit, alltransit.cnt.org) indicating that the City has very good combination of trips per week and number of jobs accessible enabling many people to take transit to work. The City's score was lower than the County score of 6.8. AllTransit data also shows that in Signal Hill, all workers and households in general (100%) live within  $\frac{1}{2}$  mile of transit compared with 90 percent for the County.

Because of the small size of the City, transportation access does not vary across the City.

### Jobs Proximity

Jobs proximity scores are generally the same for the total regional population and the population below the federal poverty line. None of the regional scores exceed 50.

The AFFH data viewer from HCD includes a jobs proximity index that quantifies the accessibility of a given residential neighborhood as a function of its distance to all job locations within a CBSA, with larger employment centers weighted more heavily. The higher the index value, the better the access to employment opportunities for residents in a neighborhood. In Signal Hill, the highest scores were in the northern portion of the City nearest to Long Beach Municipal Airport but most of the rest of the City ranked just below that. There are no areas of the City that rank in the bottom two index categories indicating that the City has above average job access. The closest lowest ranking areas are in the north and southern areas in the City of Long Beach.

## Environmental Health

Environmental health scores are generally the same for the total regional population and the population below the federal poverty line. The City of Signal Hill is located near the 405 freeway and over the Long Beach Oil Field and therefore has associated air quality, soils, and oil and gas operations impacts to mitigate prior to development.

The Long Beach Oil Field is a large oil field underneath the cities of Long Beach and Signal Hill. Discovered in 1921, the field was enormously productive in the 1920s, with hundreds of oil derricks covering Signal Hill and adjacent parts of Long Beach; largely due to the huge output of this field, the Los Angeles Basin produced one-fifth of the nation's oil supply during the early 1920s. The field is eighth largest by cumulative production in California, and although now largely depleted, still officially retains around 5 million barrels of recoverable oil out of its original 950 million. 294 wells remained in operation as of the beginning of 2008, and in 2008 the field reported production of over 1.5 million barrels of oil. The field is currently run entirely by small independent oil companies, with the largest operator in 2009 being Signal Hill Petroleum, Inc.

The California Office of Environmental Health Hazard Assessment (OEHHA) developed a screening methodology to help identify California communities disproportionately burdened by multiple sources of pollution called the California Communities Environmental Health Screening Tool (CalEnviroScreen). In addition to environmental factors (pollutant exposure, groundwater threats, toxic sites, and hazardous materials exposure) and sensitive receptors (seniors, children, persons with asthma, and low birth weight infants), CalEnviroScreen also takes into consideration socioeconomic factors. These factors include educational attainment, linguistic isolation, poverty, and unemployment. Research has shown a heightened vulnerability of people of certain ethnicities and lower socioeconomic status to environmental pollutants. The Environmental index scores shows that the entire City scores in the lowest index category. The composite index scores shows that the City scores lower than neighboring areas to the east, but higher than neighboring areas to the West where Interstate 710 and the regional freight rail network that runs south to the ports most likely contribute to higher scores. The southeast area of the City earned lower (better) scores but stills scored in the higher categories.

Disadvantaged communities refer to the areas throughout California which most suffer from a combination of economic, health, and environmental burdens. These burdens include poverty, high unemployment, air and water pollution, presence of hazardous wastes as well as high incidence of asthma and heart disease. CalEnviroScreen combines different types of census tract-specific information into a score to determine which communities are the most burdened or disadvantaged. Most of the City is also designated as a Disadvantaged Community (DAC) (except for the southeast corner of the City).

**Table B-19: Access to Opportunity Indicators by Race/Ethnicity**

(Los Angeles-Long Beach-Anaheim, CA) Region	Low Poverty Index	School Proficiency Index	Labor Market Index	Transit Index	Low Transportation Cost Index	Jobs Proximity Index	Environmental Health Index
Total Population							
White, Non-Hispanic	65.34	68.72	67.34	76.59	79.87	46.74	25.76
Black, Non-Hispanic	36.77	35.61	36.13	81.34	83.42	46.12	13.85
Hispanic	36.01	39.67	35.43	80.65	83.98	43.16	14.60
Asian or Pacific Islander, Non-Hispanic	55.68	62.51	57.42	78.82	82.35	45.30	17.44
Native American, Non-Hispanic	48.97	50.86	48.40	78.04	81.53	44.84	21.67
<b>Population below federal poverty line</b>							
White, Non-Hispanic	53.04	61.67	59.07	80.43	84.23	48.46	20.26
Black, Non-Hispanic	23.71	28.40	26.45	83.34	85.48	44.58	12.70
Hispanic	24.25	33.59	28.83	83.28	86.96	43.89	11.76
Asian or Pacific Islander, Non-Hispanic	45.15	57.07	50.53	82.27	86.69	47.52	13.85
Native American, Non-Hispanic	32.13	37.36	34.86	80.82	84.18	47.51	19.09

Note 1: Data Sources: Decennial Census; ACS; Great Schools; Common Core of Data; SABINS; LAI; LEHD; NATA Note 2: Refer to the Data Documentation for details ([www.hudexchange.info/resource/4848/affh-data-documentation](http://www.hudexchange.info/resource/4848/affh-data-documentation))

## GATEWAY CITIES REGION AND ACCESS TO OPPORTUNITY ANALYSIS

### TCAC/HCD Access to Opportunity Indicators

The TCAC/HCD Opportunity Mapping Tool is based on 12 indicators of access to opportunity. Table B-20 describes the Housing Opportunity Mapping Indicators and Measures.

**Table B-20: California TCAC/HCD Housing Opportunity Mapping Indicators and Measures: 2021**

Indicator	Measure
Poverty	Percent of the population with incomes above 200% of the federal poverty level
Adult Education	Percent of adults with a bachelor's degree or above
Employment	Percent of adults age 20-64 who are employed in the civilian labor force or in the armed forces
Job Proximity	Number of jobs filled by workers with less than a BA that fall within a given radius (determined by the typical commute distance of low wage workers in each region) of each census tract population weighted centroid
Median Home Value	Value of owner-occupied units
CalEnviroScreen	CalEnviroScreen 3.0 Pollution Indicators
Math Proficiency	Percentage of 4 <sup>th</sup> graders who meet or exceed math proficiency standards
Reading Proficiency	Percentage of 4 <sup>th</sup> graders who meet or exceed literacy standards
High School Graduation Rates	Percentage of high school cohort that graduate on time
Student Poverty Rate	Percent of students not receiving free or reduced-price lunch
Poverty	Tracts with at least 30% of the population falling under the federal poverty line
Racial Segregation	Tracts with a racial Location Quotient of higher than 1.25 for Black, Hispanic, Asian, or all people of color in comparison to the county

Source: California Fair Housing Task Force, Methodology for the 2021 TCAC/HCD Opportunity Map, December 2020, pages 6 and 7

Of the 12 housing opportunity indicators, three are associated with poverty, one with racial segregation, one with job proximity and three with school proficiency.

### Gateway Cities Regional Analysis of Access to Opportunity

Signal Hill is a member of the Gateway Cities COG, which encompasses a geographic area that is representative of a -region: for purposes of analysis.

Neighborhoods – meaning census tracts – are designated into one of the following six categories:

- Highest
- High
- Moderate
- Low
- High Segregation & Poverty

The 2021 TCAC/HCD Housing Opportunity Mapping classifies two of the City's census tracts as moderate resource and one census tract as high resource:

Census Tract	Resource Category	Population	Percent
■ 5734.01	Moderate	1,642	14.2%
■ 5734.02	Moderate	6,384	55.3%
■ 5734.03	High	3519	30.5%

Tract-level indices were summed to the jurisdictional-level by SCAG using area-weighted interpolation. Using 2013-2017 American Community Survey population data, SCAG determined the share of each jurisdiction's population in each of the five neighborhood resource categories.

Table B-21 shows the number of people living in each of the five neighborhood resource categories while Table B-22 shows the percentage.

Of the City's total population 69.5% live in the two moderate resource neighborhoods and 30.5% live in the high resource neighborhood.

In contrast, of the total Gateway Cities regional population, 23.4% and 20% live in s moderate or high resource neighborhood, respectively.

In fact, 14 of the 28 jurisdictions located within the Gateway Cities COG have 50% or more of their population living in either a high segregation and poverty or low resource neighborhood. Six of the 28 jurisdictions have 99% or more of their population living in either a high segregation and poverty or low resource neighborhood.

Signal Hill is one of six cities in which 100% of the population lives in a moderate, high, and/or highest resource neighborhood. The other cities include Avalon, Cerritos, Downey, La Mirada, and Lakewood.

The poverty rates of the three census tracts all are less than 18%, which is well below the 30% threshold of the opportunity mapping methodology,

Based on the above information and the fact that City has moderate and high resource neighborhoods, access to opportunity is deemed to not be a fair housing issue.

**Table B-21: Gateway Cities Neighborhood Resource Categories by City (Number)**

Jurisdiction	High Segregation & Poverty	Low Resource	Moderate Resource	High Resource	Highest Resource	Missing/Insufficient Data	Total
Artesia	0	3,198	1	13,625	43	0	16,867
Avalon	0	0	0	3,025	0	1	3,026
Bell	2,911	33,859	2	0	0	0	36,772
Bell Gardens	31,021	11,819	8	0	0	0	42,848
Bellflower	4,376	20,347	42,202	11,056	0	0	77,981
Cerritos	4	9	13	11,258	38,810	0	50,094
Commerce	26	13,310	0	2	0	0	13,338
Compton	26,187	73,259	753	0	0	0	100,199
Cudahy	12,774	9,263	2,955	0	0	0	24,992
Downey	0	18	22,666	90,614	0	31	113,329
Hawaiian Gardens	10,477	0	4,398	2	0	0	14,877
Huntington Park	27,053	22,415	11,300	0	0	0	60,768
Industry	0	2,662	16,386	2,125	1,493	0	22,666
La Mirada	0	33	34	39,629	9,540	0	49,236
Lakewood	2	5	9,421	61,310	9,916	0	80,654
Long Beach	106,017	150,119	59,783	82,625	54,553	150	453,247
Lynwood	21,353	48,878	82	0	0	0	70,313
Maywood	13,024	12,756	0	0	0	0	25,780
Montebello	0	21,672	42,351	1	0	0	64,024
Norwalk	6,588	4,120	72,215	23,838	6	0	106,767
Paramount	0	44,745	10,949	0	0	0	55,694
Pico Rivera	0	9,100	55,619	394	0	0	65,113
Santa Fe Springs	9	12,378	3,928	6,523	0	7	22,845
Signal Hill	0	0	8,026	3,519	0	0	11,545
South Gate	2,142	43,375	49,550	1	0	0	95,068
Unincorporated	46,950	85,450	97,290	63,806	199,108	1,396	494,000
Vernon	3	331	0	57	0	0	391
Whittier	0	11,688	18,471	35,933	17,338	0	83,430
<b>Total</b>	<b>310,917</b>	<b>634,809</b>	<b>528,403</b>	<b>449,343</b>	<b>330,807</b>	<b>1,585</b>	<b>2,255,864</b>
Percent	13.8%	28.1%	23.4%	19.9%	14.7%	0.1%	100.0%

Source: Southern California Association of Governments, Final RHNA Methodology Data Appendix, Population within TCAC Resource Areas, March 5, 2020

**Table B-22: Gateway Cities Neighborhood Resource Categories by City (Percent)**

Jurisdiction	High Segregation & Poverty	Low Resource	Lowest Resource (Seg/Pov + Low Resource)	Moderate Resource	High Resource	Highest Resource
Artesia	0.0%	19.0%	19.0%	0.0%	80.8%	0.3%
Avalon	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Bell	7.9%	92.1%	100.0%	0.0%	0.0%	0.0%
Bell Gardens	72.4%	27.6%	100.0%	0.0%	0.0%	0.0%
Bellflower	5.6%	26.1%	31.7%	54.1%	14.2%	0.0%
Cerritos	0.0%	0.0%	0.0%	0.0%	22.5%	77.5%
Commerce	0.2%	99.8%	100.0%	0.0%	0.0%	0.0%
Compton	26.1%	73.1%	99.2%	0.8%	0.0%	0.0%
Cudahy	51.1%	37.1%	88.2%	11.8%	0.0%	0.0%
Downey	0.0%	0.0%	0.0%	20.0%	80.0%	0.0%
Hawaiian Gardens	70.4%	0.0%	70.4%	29.6%	0.0%	0.0%
Huntington Park	44.5%	36.9%	81.4%	18.6%	0.0%	0.0%
Industry	0.0%	11.7%	11.7%	72.3%	9.4%	6.6%
La Mirada	0.0%	0.1%	0.1%	0.1%	80.5%	19.4%
Lakewood	0.0%	0.0%	0.0%	11.7%	76.0%	12.3%
Long Beach	23.4%	33.1%	56.5%	13.2%	18.2%	12.0%
Lynwood	30.4%	69.5%	99.9%	0.1%	0.0%	0.0%
Maywood	50.5%	49.5%	100.0%	0.0%	0.0%	0.0%
Montebello	0.0%	33.8%	33.8%	66.1%	0.0%	0.0%
Norwalk	6.2%	3.9%	10.0%	67.6%	22.3%	0.0%
Paramount	0.0%	80.3%	80.3%	19.7%	0.0%	0.0%
Pico Rivera	0.0%	14.0%	14.0%	85.4%	0.6%	0.0%
Santa Fe Springs	0.0%	54.2%	54.2%	17.2%	28.6%	0.0%
Signal Hill	0.0%	0.0%	0.0%	69.5%	30.5%	0.0%
South Gate	2.3%	45.6%	47.9%	52.1%	0.0%	0.0%
Unincorporated	9.5%	17.3%	26.9%	19.8%	13.0%	40.4%
Vernon	0.8%	84.5%	85.3%	0.0%	14.7%	0.0%
Whittier	0.0%	14.0%	14.0%	22.1%	43.1%	20.8%

Source: Southern California Association of Governments, Final RHNA Methodology Data Appendix, Population within TCAC Resource Areas, March 5, 2020

## DISPROPORTIONATE HOUSING NEEDS

### Background

For purposes of the Assessment of Fair Housing -

Disproportionate housing needs refers to a condition in which there are *significant disparities* in the proportion of members of a *protected class* experiencing a *category of housing need* when compared to the proportion of members of any other *relevant groups or the total population* experiencing that category of housing need in the applicable geographic area. For purposes of this definition, categories of housing need are based on such factors as cost burden, severe cost burden, overcrowding, and substandard housing conditions.... 24 CFR 5.154 [Emphasis added]

The categories of housing need, therefore, include:

- Cost Burden
- Severe Cost Burden
- Overcrowding
- Substandard Housing Conditions

Disproportionate, according to the *Assessment of Fair Housing* federal rules, means that there are significant disparities - within a protected class - of the percentage of people or households experiencing a housing need. No threshold measures are given by HUD to enable jurisdictions to determine what is significant.

## Indicators of Disproportionate Housing Needs

A disproportionate housing need exists when the members of a racial/ ethnic group at a given income level experience housing problems at a greater rate (10 percentage points or more) than the jurisdiction as a whole. The Analysis of Impediments to Fair Housing Choice for the Los Angeles Urban County (of which Signal Hill is a part of) shows that the percentage of Asian and Native American households experiencing housing problems is far less than the Hispanic percentage, at around 50 percent for each group. White households fare even better, with only 43 percent of households experiencing any of the four housing problems. The data also shows that family households with five or more people experience the greatest percentage of housing problems than do smaller or non-family households. This may be due to the fact that one of the HUD-defined housing problems is the presence of more than one person per room, and a household with five or more people is very likely to match this one criterion alone (unless of course the house has many rooms). Fully 75 percent of these households experience any of the four housing problems, the highest percentage of any category.

AI data shows severe housing problems for households in the service area, and while all percentages are lower, Hispanic households again experience the highest percentage. As was the case with housing problems above, only Hispanic and Black households experience severe housing problems at a percentage higher than that of the service area. White households are again the lowest percentage of any racial or ethnic category, with only 23.5 percent experiencing any of four severe housing problems. While the AI does not provide an analysis at smaller geographies, HUD data, known as the Comprehensive Housing Affordability Strategy, or CHAS, for 2013-2017 shows that renter households experience housing problems at a greater proportion than owner households. Lower-income households also experience significantly higher proportion of housing problems compared with their high-income counterparts.

### Cost burden

State and federal standards specify that households spending more than 30 percent of gross annual income on housing experience a housing cost burden. When a household spends more than 30 percent of its income on housing costs, it has less disposable income for other necessities such as health care. 2014-2018 HUD CHAS data shows that the City has only a slightly lower proportion of cost burdened households (43%) than the County (45%).

#### *Homeowners*

Geographic distribution of cost burden data shows that 40-60% of owner households experience cost burden with little variation in different neighborhoods although the northwest corner of the City has a

slightly lower rate of owners overpaying. Since 2010 the proportion of overpaying, owner households has increased across the whole City (a trend seen statewide). Compared with the surrounding areas, Signal Hill has similar levels of cost burden for homeowners with some pockets of higher levels of overpayment to the south in the City of Long Beach. The surrounding cities of Carson, Lakewood, and Cypress have many areas with lower levels of cost burden (at levels less than 40%). Compared with the wider region, the City has overall lower levels of cost burden. Within the County of Los Angeles, there are pockets of cost burden levels for homeowners' at levels greater than 80% in the central areas of Los Angeles and in the San Fernando Valley. Most cities in the region have areas of cost burden in excess of 80 percent of renter households but the City of Signal Hill does not.

#### *Renters*

Data shows that 40-60% of renter households experience cost burden with little variation in different neighborhoods although the southeast corner of the City has a slightly higher rate of renters overpaying but this may be due to less renter occupied households in hillside neighborhoods. This area also saw an increase since 2010 in the proportion of overpaying renter households. Compared with the surrounding areas, Signal Hill has similar levels of cost burden for renters. Compared with the wider region, the City has overall lower levels of cost burden. Within the County of Los Angeles, there are pockets of cost burden levels for renter at levels greater than 60% in the central areas of Los Angeles and in the San Fernando Valley.

Data are unavailable on the cost burdens and substandard housing conditions experienced by the different protected classes (e.g., disability, familial status). Data are available on cost burden by race and ethnicity.

#### Extremely Low-Income by Race and Ethnicity

Table B-22 shows that the percentages of extremely low-income Black and Hispanic households are considerably higher than the White and Asian households. This may very well mean that Black and Hispanic households experience disproportionate housing needs relating to cost burden and severe cost burden when compared to White and Asian households.

#### Extremely Low-Income Households by Tenure

Twenty-two percent of all renters have extremely low incomes. On the other hand, only 6% of owners have extremely low incomes. Thus, fair housing protected groups that live in renter- occupied housing are more likely than owners to experience disproportionate housing needs.

#### Very Low-Income Cost Burdens by Income

Table B-23 describes the number of very low-income renter and owner households that experience cost burden and severe cost burden. For renters, housing cost is gross rent (contract rent plus utilities). For owners, housing cost is "select monthly owner costs", which includes mortgage payment, utilities, association fees, insurance, and real estate taxes.

Among very low *renters*, 90% are cost burdened and 52% are severely cost burdened. The data also demonstrate that 53% of all very low-income *owners* are cost burdened and 39% are severely cost burdened.

This means that the renter households within each racial and ethnic group are more likely to be cost burdened and severely cost burdened than their owner counterparts.

### **Overcrowding and Substandard Housing**

In response to a mismatch between household income and housing costs in a community, some households may not be able to buy or rent housing that provides a reasonable level of privacy and space. According to both California and federal standards, a housing unit is considered overcrowded if it is occupied by more than one person per room (excluding kitchens, bathrooms, and halls). In Signal Hill, 5.4% of housing units are overcrowded. Overcrowding is more prevalent in rental households than owner households. Signal Hill experiences less overcrowding than Los Angeles County at large, where 11% of households are overcrowded.

Citywide, AFFH data viewer data shows that overcrowding is less acute in Signal Hill as all of the City has overcrowding rates lower than the state (8.2%). The lower level of overcrowding in the City is in stark contrast to areas just south within the cities of Long Beach and Wilmington and north to southeast Los Angeles cities such as Compton where large swaths have overcrowding rates greater than 20% of all households. AFFH viewer does not have data for severe overcrowding in the City of Signal Hill. While overcrowding does not vary geographically it does vary by race/ethnicity. Hispanics residents experience disproportionate housing need with respect to overcrowding. The percentage of overcrowded Hispanic households is higher than that experienced by white, Asian and black households. Refer to Table B-24.

The City's housing stock is generally younger compared with the region. The median year built for housing in Signal Hill is 1980 compared with 1963 for the County. Renter occupied housing is older and has a median year built of 1973 compared to 1983 for owner occupied housing. While age of housing is a general indicator of potential maintenance needs, a better indicator of substandard housing is lack of complete kitchen or plumbing facilities. According to the 2015-2019 American Community Survey, the City has 113 housing units lacking complete kitchen facilities and 12 dwellings lacking complete plumbing facilities. City data estimates that the number of substandard housing units falls within the range of 113 to 200. There are no existing housing units that need to be demolished and replaced because they are in dilapidated condition.

**Table B-23: Extremely Low-Income Households by Race/Ethnicity: 2012-2016**

Race and Ethnicity	Total Households	Extremely Low Households	Percent Extremely Low Income Households
White, Non-Hispanic	1,578	105	6.7%
Black, Non-Hispanic	514	110	21.4%
Asian and Other, Non-Hispanic	884	140	15.8%
Hispanic	1,094	249	22.8%
<b>Total</b>	<b>4,070</b>	<b>604</b>	<b>14.8%</b>
Renter-occupied	2,245	495	22.0%
Owner-occupied	1,830	110	6.0%
<b>Total</b>	<b>4,075</b>	<b>605</b>	<b>14.8%</b>

Source: Southern California Association of Governments, Pre-Certified Local Housing Data, August 2020, based on CHAS Data 2012-2016

**Table B-24: Very Low Income (<50% AMI) Cost Burden and Severe Cost Burden by Tenure: 2013-2017**

Tenure	Total Low Income (<50% AMI)	Number Cost Burdened	Percent Cost Burdened	Number Severely Cost Burdened	Percent Severely Cost Burdened
Renters	1,020	920	90.2%	530	52.0%
Owners	255	135	52.9%	100	39.2%
Total	1,275	1,055	82.7%	630	49.4%

Note: Low/moderate income means less than 80% of the area median income Cost burden = 30% or more of income spent on housing costs

Severe cost burden = 50% or more spent on housing costs

Source: Comprehensive Housing Affordability Strategy (-CHAS||) Data, based on 2013-2017 American Community Survey and 2010 Census

**Table B-25: Disproportionate Housing Needs Analysis Overcrowding by Race and Ethnicity**

Race/Ethnicity	Number of Households	Number Overcrowded	Percent Overcrowded
Hispanic	1,075	149	13.9%
Some Other Race Alone	275	25	9.1%
Black/African American	554	31	5.6%
Asian	1,048	46	4.4%
White Alone, Not Hispanic or Latino	1,944	22	1.1%
Two or More Races	142	0	0.0%
American Indian/Alaska Native	8	0	0.0%
Native Hawaiian/Pacific Islander	6	0	0.0%
<b>Total</b>	<b>5,052</b>	<b>273</b>	<b>5.4%</b>

Source: U.S. Census Bureau; American Community Survey, 2015-2019 5-Year Estimates, Table B25014 A-I, Occupants Per Room

## Displacement Risk and Homelessness

Displacement refers to instances where a household is forced or pressured to move from their home against their wishes. Areas with high demand for homes drive up housing costs and increase pressure for redevelopment, resulting in the potential for displacement. The displacement risk in Signal Hill can be evaluated based on physical and economic displacement.

### Economic Displacement

Economic displacement is due to the inability to afford rising rents or costs of homeownership like property taxes. The HCD AFFH viewer identifies communities, or places where residents may be particularly vulnerable to displacement in the context of rising property values. Based on the data most of the City is vulnerable to displacement except for the southeast portions of the city (in the hillside areas and to the east). The vulnerability, according to the data is based on the higher proportion of persons of color and lower income and renter households and observed rent increases.

The City is located within a cluster of identified vulnerability that includes many of the central areas of Los Angeles County including the neighboring cities of Long Beach and Wilmington. Areas nearby with

identified vulnerability also include the cities of Compton and Paramount. Many of these areas have lower rents compared with the region but the high demand for housing and rapidly rising housing costs are creating regional economic pressure and may further decrease the availability of affordable housing as residents in more expensive parts of Los Angeles County actively seek areas with lower median rents. Regionally, areas in central Los Angeles County have lower median gross rents, as indicated by the Location Affordability Index in the HCD AFFH Data Viewer, than areas in West Los Angeles, the South Bay, a few cities in the northern San Gabriel Valley (parts of Pasadena and South Pasadena), and western San Fernando Valley.

### ***Physical Displacement***

Physical displacement is the result of eviction, acquisition, rehabilitation, or demolition of property; the expiration of covenants on rent- or income-restricted housing; or the rising cost of housing. Tenure and displacement are closely tied as renters are at higher risk of displacement from rising rental prices. In April 2017, the California Housing Partnership and the Corporation for Supportive Housing completed a report on affordable housing in Los Angeles County and found that the County needs to add more than 550,000 affordable homes to meet current demand among renter households at or below 50 percent of area median income. The report mapped countywide patterns of transit access, displacement risk, and the ratio of low-wage jobs to affordable homes (a metric referred to as having a good “fit”); it found that gentrification occurred almost entirely in urban areas well-served by transit. Gentrification will place an inordinate displacement pressure on low-income households, especially for those living in the areas well served by transit. The center areas of the city have a higher percentages of renter households compared to the north and east sides of the City and within this area there is one block groups (south of Willow Street and west of Walnut Avenue) that have a median income lower than the state average and may make these areas susceptible to displacement due to lower median income and proportion of renters.

State housing law requires an inventory and analysis of government-assisted dwelling units eligible for conversion from lower income housing to market rate housing during the next ten years. Reasons for this conversion may include expiration of subsidies, mortgage pre-payments or pay-offs, and concurrent expiration of affordability restrictions. The California Housing Partnership (CHP) provides data on assisted housing units and assesses the level of risk to converting to market rate. These data identify homes without a known overlapping subsidy that would extend affordability beyond the indicated timeframe and unless otherwise noted are not owned by a large/stable non-profit, mission-driven developer. As of 2021, CHP has assigned a “Low Risk” of conversion to market rate housing to Signal Hill’s four affordable housing developments. This risk level means that the affordability restrictions extend beyond 10 years, or the development is owned by a large/stable non-profit, mission-driven developer.

Individuals or families who lack or are perceived to lack a fixed, regular, and adequate nighttime residence, or who have a primary nighttime residence in a shelter, on the street, in a vehicle, or in an enclosure or structure that is not authorized or fit for human habitation. People experiencing homelessness are vulnerable to violence and criminalization due to their unhoused status. The 2020 Los Angeles County Homeless Point in Time (PIT) Count found 46 unsheltered homeless adults and children in Signal Hill. This is in contrast to the 1,582 unsheltered persons identified by the surrounding City of Long Beach in their 2020 PIT Count.

### **Local Knowledge and Other Relevant Factors**

Several factors have contributed to the City's demographic and environmental development and the City's public outreach efforts confirmed the need for additional housing types.

### ***Oil Production***

The City's location over an oil field that was historically very productive and still has oil extraction activities has shaped the development of multi-family and affordable housing. Most larger sites for housing development are owned by a petroleum company and require site remediation. As such the City has worked closely with SH Petroleum to identify new sites for housing and compete all site remediation. While this may be seen as a housing constraint, this type of development process would be burdensome and expensive for private developers. The City and property owner's experience in this type of development has resulted in development of higher density, affordable projects that most likely would not have developed without intervention. As development opportunities become more limited, the transition from oil production to housing will continue in the City.

### ***Redlining***

Historical lending patterns have been a primary contributor to these segregation trends. The Home Owners' Loan Corporation (HOLC) created a neighborhood ranking system infamously known today as redlining. HOLC trained many home appraisers in the 1930s. Local real estate developers and appraisers in over 200 cities assigned grades to residential neighborhoods. These maps and neighborhood ratings set the rules for decades of real estate practices. The grades ranged from A to D.

- A (Best): Always upper- or upper-middle-class White neighborhoods that HOLC defined as posing minimal risk for banks and other mortgage lenders, as they were "ethnically homogeneous" and had room to be further developed.
- B (Still Desirable): Generally nearly or completely White, U.S. -born neighborhoods that HOLC defined as "still desirable" and sound investments for mortgage lenders.
- C (Declining): Areas where the residents were often working-class and/or first or second-generation immigrants from Europe. These areas often lacked utilities and were characterized by older building stock.
- D (Hazardous): Areas here often received this grade because they were "infiltrated" with "undesirable populations" such as Jewish, Asian, Mexican, and Black families. These areas were more likely to be close to industrial areas and to have older housing.

Using the HCD AFFH Data viewer shows that all of the City was identified as "hazardous" and is the most significant area redlined as such in the south bay area of Los Angeles County. The overt practice of denying mortgages based upon race and ethnicity played a significant role in the legalization and institutionalization of racism and segregation throughout the country including in Signal Hill and the surrounding City of Long Beach.

### ***Employment Industry Shifts***

In addition to the City's history of oil production activities, the South Bay has a long history as a manufacturing hub that blossomed during World War II with the establishment of the aerospace companies near the Long Beach Airport (LGB). Many aviation and aerospace companies continue to operate in and around LGB today. This history has shaped development in the City of Signal Hill where large pockets of land have been used for industrial and manufacturing uses. Over the years the City (and

nation in general) has transitioned away from manufacturing uses towards employment in lower paying sectors including retail services, logistics and hospitality. As the regional economy underwent these structural changes, rapid demographic shifts occurred as well. From 1970 to 2020 the White population in the region declined. Between 2000 and 2020 (the timeframe for which data is readily available), the white population in Signal Hill decreased from 36% of the population to 24% of the population. A similar decline occurred at the County level. This created communities inadequately served by current policies and institutions related to either housing or economic development. The City's approach to the site inventory ensures that many of these transitioning manufacturing areas are served through the addition of quality, affordable housing.

### ***Public outreach***

As part of the Housing Element Update, a community survey was circulated from April to August, 2021 with 150 respondents. The survey included a section for responders to add additional comments and some that were received include:

- Reduce restrictions to make it economical to build a quality product that enhances the entire community.
- When you plan new housing developments, continue the trail system.
- Allow ADU's, it's a great solution for older people needing supplemental income as well as young people having a more affordable option.
- Easing of zoning restrictions and faster approval to re-purpose existing structures or build new structures for housing.
- Make housing affordable and available.
- Move forward on the trendy development around Mother's Market.
- Need more single-family standalone houses.
- Affordable w assistance.
- If you build more housing, make sure that families have somewhere to park their cars.
- Need to have more affordable housing for homeless, single mothers or fathers, help families qualify for new homes that are affordable and not expensive.
- More affordable housing, open a Section 8 program, more program for disabled and homeless.
- Remove any oil well sites that are no longer in use.
- Provide a mixture of high, moderate, and low-density housing.

Other key survey findings include:

- 70% of respondents would like housing to be built in the Civic Center neighborhood, followed by 64% located near commercial centers.
- 71% of respondents believe that housing should be available to service workers, 68% noted that housing should be affordable to working professionals, and 63% identified housing should be affordable to service workers.
- Approximately half of respondents believe that proximity to amenities such as grocery stores, religious facilities, schools, etc. are important.
- The re-purposing of former oil property for new housing was supported by 67% of the responses.

The themes showed that there is a need for a variety of housing types (single, multifamily, ADUs) at a variety of affordability levels and the need for neighborhood amenities, particularly in areas where housing is not as prevalent.

## **Summary of Findings**

Signal Hill is a very small city geographically (only three Census Tracts and a total of 2.2 square miles) and as such many demographic patterns and trends do not vary significantly across the City. Nonetheless, a few key findings do show some variations that may limit to fair housing and opportunity access:

- The east side of the City (Census tract 5734.03) has better environmental quality, higher housing costs, and less renters. This part of the City is also identified as having less displacement vulnerability. Historically this side of the City has developed differently due to the topology of the area. Because there are hillside areas, development of multifamily housing has been more challenging and expensive due to slope mitigation requirements. Undeveloped land in this hillside area is deemed as unstable and has not been addressed due to the location of active seismic hazards (the Northeast Flank Fault of the Newport-Inglewood Fault System cuts diagonally across this area and is considered an active fault). While there is the potential for development of small sites in this area, they do not meet the size requirements needed to address the RHNA, particularly if rezoning consistent with Government Code 65583.2[h] is required. The limits on the size and location of developable properties have resulted in development of more single-family housing compared with other parts of the City.
- Overcrowding is not geographically isolated, instead, a disproportionate need among Hispanic households related to overcrowding exists
- Based on the data most of the City is vulnerable to displacement except for the southeast portions of the city (in the hillside areas and to the east). The vulnerability, according to the data is based on the higher proportion of persons of color and lower income and renter households and observed rent increases.

## Sites to Affirmatively Further Fair Housing

Pursuant to AB 686, for housing elements due on or after January 1, 2021, sites must be identified throughout a community in a manner that affirmatively furthers fair housing opportunities (Government Code Section 65583(c)(10)). For purposes of the housing element site inventory, this means that sites identified to accommodate the lower-income need are not concentrated in low-resourced areas (lack of access to high performing schools, proximity to jobs, location disproportionately exposed to pollution or other health impacts) or areas of segregation and concentrations of poverty. The sites identified in this Housing Element are not concentrated in low resources areas.

Two factors must be considered when looking at site placement and demographic trends and patterns: all sites are located within one half mile of each other due to the small size of the City (2.2 square miles) and the northern part of the City (east of Orange Avenue and North of Willow Street) have minimal residential uses and as such household or individual data is not available for this area. Some data does show information for this block group and in those cases the data is described. The four sites identified in the Sites Inventory are located within the center of the City near services and transit. No sites are located east of this area due to constraints posed by slope instability and a lack of adequately sized parcels. The following summarizes findings of the AFFH analysis compared with site location:

- Segregation:
  - Racial demographics – Two affordable sites are in an area with no housing – the City chose this area to start opening this area to housing. The other two sites are in an area where non-white residents make up between 60 to 80% of the population.
  - Income – no income data for Census block group 5734.021 where the two affordable sites are located. The other two sites are in an area with a similar median income as the State and

- between lower income areas on the west and higher income areas on the east. There is no geographic variation in poverty data and all sites are in areas with less than 20% of the population living in poverty.
- Disability - There is no geographic variation in disability data and all sites are in areas with less than 10% of the population having a disability.
  - Household type - There is no geographic variation in household type data and all sites are in areas with less than 10% of the children living in female headed households and 20 to 40% of children living in married couple households.
  - Opportunity Access – the California Tax Credit Allocation Committee Opportunity Mapping data shows that all sites are located within a moderate resources area. This area is located between lower resource areas on the west and south and higher resources areas on the east.
  - Job Proximity – The two affordable sites are in an area with a higher job proximity compared with the two upper income sites.
  - Education – all sites are located within the same level of education opportunity and have higher TCAC Education scores than most surrounding neighborhoods.
  - Transportation– there is no variation in transportation and transit access for the sites and all are in an area with superior local and regional transportation options.
  - Environmental – Most of the City is identified as having lower environmental quality. All sites are in the same CalEnviroScreen scoring area. The neighborhoods to the east of the sites (Census tract 5734.03) have a somewhat lower (better) score but are still in the middle ranges of the data (meaning that are still in the top half percentile and have environmental quality issues).

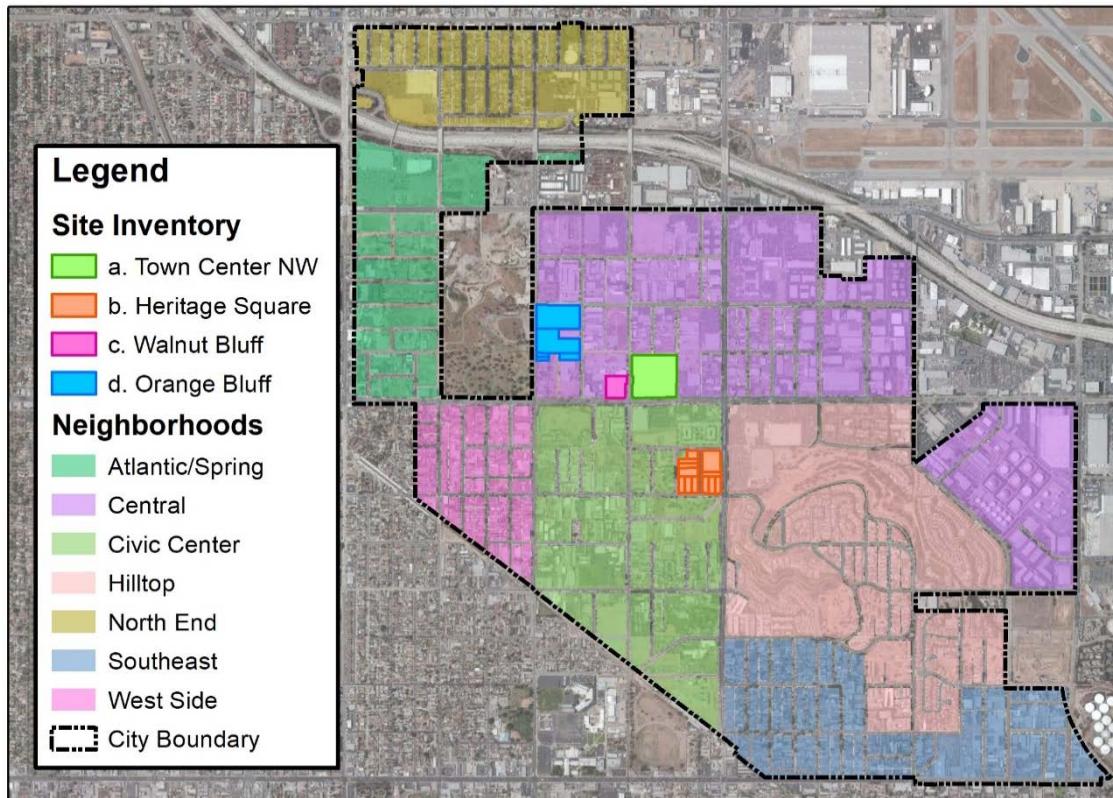
### Evaluation of Improved or Exacerbated Conditions

The City's residential neighborhoods are primarily built out. Future residential development will likely occur on land that is or was in use for oil extraction. This RHNA strategy relies on rezoning oil production sites for the development of housing. As previously mentioned, all sites are located within one half mile of each other due to the small size of the City (2.2 square miles) and as such demographic patterns and trends vary only slightly and no significant disparities are identified. Two main findings include:

- Improved conditions: The two affordable housing sites are in the City's Central neighborhood located in the northern part of the City (north of Willow Street). This area has almost no housing and as the transition from oil production to residential uses continues to occur, the City is leading the effort for development of housing that is affordable to lower income households. The existing five affordable housing developments in Signal Hill are in neighborhoods along the southern City boundary. This geographic distribution ensures that the new affordable housing development are not concentrated in the southern neighborhoods. The location of the sites was also chosen based on the Tax Credit Allocation Committee/Low Income Housing Tax Credit (TCAC/LIHTC) site location criteria and include proximity to:
  - Transit stop
  - Public park or community center
  - Book lending public library
  - Full scale grocery store/supermarket
  - Neighborhood market
  - Weekly farmer's market
  - Public elementary, middle, high school
  - Medical clinic or public hospital
  - Pharmacy
- Exacerbated conditions: All sites are in the same CalEnviroScreen scoring area which has slightly worse environmental quality compared to areas to the east. Opportunities for new housing in

areas with good environmental quality are limited as most of the City and surrounding areas are identified as having lower environmental quality due in great part to the emissions produced by the vehicles that use the surrounding freeways, as well as the ship traffic and cargo handling equipment in the San Pedro Bay ports.

## Exhibit B-1: AFFH Sites Inventory Map



## Local Knowledge

The City's location over an oil field that was historically very productive and still has oil extraction activities has shaped the development of multi-family and affordable housing and in this case, site selection. Most larger sites for housing development are owned by a petroleum company and require site remediation. As such the City has worked closely with SH Petroleum to identify new sites for housing and complete all site remediation. While this may be seen as a housing constraint, this type of development process would be burdensome and expensive for private developers. The City and property owner's experience in this type of development has resulted in development of higher density, affordable projects that most likely would not have developed without intervention. This is considered an improved condition as the work the City and the property owner are undertaking to prepare the sites for development means that the affordable units will be built on land that is shovel ready, with a ministerial review process, and with the expensive environmental analysis and mitigation process complete. Affordable housing development on this type of land would be unlikely without this level of intervention by the City and property owner.

## Policies and Programs

Based on the outcomes of the AFFH analysis policies and programs are included in the Housing Plan to ensure that adequate sites accommodate the RHNA in a manner that affirmatively furthers fair housing. One key program action is the expected adoption of an Environmental Justice Element that will include objectives and policies that aim to reduce pollution exposure.

## Fair Housing Enforcement, Outreach and Resources Analysis

The AFFH rule defines -fair housing enforcement and fair housing outreach capacity|| to mean -the ability of a jurisdiction, and organizations located in the jurisdiction, to accept complaints of violations of fair housing laws, investigate such complaints, obtain remedies, engage in fair housing testing, and educate community members about fair housing laws and rights. 24 C.F.R. § 5.152

The City is required to identify local and regional fair housing or civil rights agencies and organizations that provide fair housing information, outreach, and enforcement, and to describe their capacity to assist in fair housing analysis and investigation.

## Housing Rights Center (HRC)

The Community Development Commission of the County of Los Angeles (CDC) receives funds from HUD for purposes of affirmatively furthering fair housing. The CDC, in turn, allocates funds to the Housing Rights Center (HRC) to provide fair housing services within the service area of the CDC. Signal Hill is one of 47 cities located within the service area of the CDC and HRC.

HRC staff includes a total of 40 persons providing service to communities located in Los Angeles and Ventura County. HRC is a 501(c)3 nonprofit agency whose mission is to actively support and promote fair housing through education, advocacy and litigation, to the end that all persons have the opportunity to secure the housing they desire and can afford, without discrimination based on their race, color, religion, gender, sexual orientation, gender identity, gender expression, national origin, familial status, marital status, disability, genetic information, ancestry, age, source of income or other characteristics protected by law.

## HRC Services

HRC provides services free of cost and acts as the go-to resource for vital housing related needs of the community. The Housing Rights Center offers residents the Fair Housing Program which includes services from four key areas: (a) Housing Discrimination Complaint Investigation, (b) Fair Housing Landlord/Tenant Counseling, (c) Education and Outreach, and (d) Fair Housing Legal Services.

### Housing Discrimination Complaint Investigation

HRC's Case Analysts (CA) investigate allegations of housing discrimination and help victims of discrimination enforce their Fair Housing rights. The Investigations Department conducts fact finding investigations and proposes potential solutions for victims of housing discrimination. HRC uses five principal methods when investigating complaints of housing discrimination. While paired testing and surveying are the most common, all methods can be an important part of gathering evidence and each is used as appropriate. The process of investigation can include: testing, surveys, on-site visits, collecting witness statements and conducting document request and review. Case resolution can include mediation,

conciliation, a referral to State and federal administrative agencies, or referral to HRC's Litigation Department.

### Fair Housing Landlord-Tenant Counseling

HRC's Trained Housing Counselors are available to answer questions about landlord-tenant rights and responsibilities, including questions about Security Deposits, Evictions, Repairs, Rent Increases, Harassment and more. Landlord Tenant Counseling is provided by telephone and in- person and is available for both tenants and landlords.

HRC also provides services to support rental relief laws in the City and County of Los Angeles.

### Education and Outreach

HRC continuously develops and distributes written materials that describe the applicable laws that protect against housing discrimination and ways to prevent housing injustices. Additionally, HRC present fair housing law workshops and programs to target audiences to teach communities how to stop housing inequity problems. The materials and programs are offered to a variety of audiences such as property personnel (e.g. landlords, property managers, and realtors), tenants, prospective homebuyers, code enforcement personnel, city employees and other non-profit organizations. Depending on the audience, the written materials and presentations can be translated by staff into Armenian, Chinese, Korean, Spanish or Russian.

Community Booths: HRC regularly staffs booths at community festivals, apartment owner association annual events, college events, and other events as they occur. The agency has developed eye-catching poster boards and banners that have proven helpful in drawing attendees to their booths.

Development and Distribution of Materials: HRC has developed materials that describe how housing injustices arise, the applicable laws that protect against housing discrimination and ways to prevent housing inequity. The materials are offered to a variety of audiences and have been translated into Spanish, Armenian, Chinese, Korean and Russian.

HRC's Agency brochure summarizes fair housing protections and encourages those with questions to contact HRC through a toll-free hotline for more information. HRC has specialized brochures targeting housing professionals, families with children, the disabled community, and prospective homebuyers. HRC also has brochures that provide an overview of the eviction process and one that focuses on why it is important to report housing discrimination.

Website: HRC's website, [www.housingrightscenter.org](http://www.housingrightscenter.org), includes comprehensive fair housing information and resources, descriptions of available services, and the ability to submit questions by email. HRC's website also features a fair housing blog which is updated regularly with news on fair housing laws and cases. Additionally, HRC has a comprehensive social media presence through the use of Facebook and Twitter. HRC welcomes the City to provide a link to HRC's website on the City's website. Since its inception, HRC's website has received over 580,000 hits.

**Education Programs for Property Owners and Managers:** HRC holds Fair Housing Certification Training Seminars for landlords and property managers. These four-hour seminars are tailored to provide landlords

with detailed analysis of fair housing law and interpretation, with specific information on discrimination against families with children, disability provisions, sexual harassment, hate crimes, and advertising.

### Fair Housing Legal Services

When HRC has gathered evidence sustaining an allegation of discrimination, and the respondent has been unwilling to conciliate the matter or the client's stated goal is litigation, HRC pursue the appropriate legal remedies. HRC's Legal Department is able to represent clients in federal and state court. When the alleged discrimination practice implicates housing policy or gives HRC an opportunity to highlight an issue of particular importance, HRC will join as a plaintiff.

### Fair Housing Inquiries/Cases

Between PY2014-2015 and 2019-20 HRC received 17 fair housing related inquiries. Of the complaints received, nine cases (53%) involved allegations of discrimination based on physical disability. The City continued partnering with the HRC to investigate complaints placed through the HRC hotline.

### Fair Housing Initiatives Program

HUD awards grants to help fight housing discrimination, which is referred to as the Fair Housing Initiative Program (FHIP). FHIP organizations partner with HUD to help people identify government agencies that handle complaints of housing discrimination.

FHIP has four initiatives. Three currently provide funds, through competitive grants, to eligible organizations. The initiatives are:

- The Fair Housing Organizations Initiative (FHOI) provides funding that builds the capacity and effectiveness of non-profit fair housing organizations by providing funds to handle fair housing enforcement and education initiatives more effectively. FHOI also strengthens the fair housing movement nationally by encouraging the creation and growth of organizations that focus on the rights and needs of underserved groups, particularly persons with disabilities.
- The Private Enforcement Initiative (PEI) offers a range of assistance to the nationwide network of fair housing groups. This initiative funds non-profit fair housing organizations to carry out testing and enforcement activities to prevent or eliminate discriminatory housing practices.
- The Education and Outreach Initiative (EOI) offers a comprehensive range of support for fair housing activities, providing funding to State and local government agencies and non-profit organizations for initiatives that educate the public and housing providers about equal opportunity in housing and compliance with the fair housing laws.
- The Administrative Enforcement Initiative (AEI) helps state and local governments that administer laws that include rights and remedies similar to those in the Fair Housing Act. This initiative also helps implement specialized projects that broaden an agency's range of enforcement and compliance activities. No funds are available currently for this program.

Between 2014 and 2019, HRC has obtained various FHIP grants. In 2014 and 2018 HRC was awarded Multi-Year (3-year) Private Enforcement Initiatives (PEI) Grants in the amount of \$300,000.00 to \$360,000 per year. Also, in 2015 HRC obtained a Fair Housing Organization Initiative (FHOI) grant in the amount \$467,747 for an 18-month period. Most recently, HRC received a FHIP Education and Outreach Initiative (EOI) grant in the amount of \$125,000.

## Fair Housing Enforcement Agencies Located in the Region

In Los Angeles County, there are two fair housing enforcement agencies: Housing Rights Center and the Fair Housing Foundation. They serve cities located in Ventura County, Los Angeles County, and Orange County.

In Orange County, there is one fair housing enforcement agency: Fair Housing Council of Orange County. It serves cities located in Orange County.

The Inland Fair Housing and Mediation Board serve cities located in San Bernardino County and Imperial County.

The Fair Housing Council of Riverside County, Inc. serves jurisdictions located in Riverside County.

## FAIR HOUSING ISSUES AND CONTRIBUTING FACTORS

Signal Hill is a very small city geographically (only three Census Tracts and a total of 2.2 square miles) and as such many demographic patterns and trends do not vary significantly across the City. Nonetheless, a few key findings do show some variations that may limit access to fair housing and opportunity. These findings are related to environmental quality and availability of affordable housing:

- The east side of the City (Census tract 5734.03) has better environmental quality, higher housing costs, and less renters. This part of the City is also identified as having less displacement vulnerability. Historically this side of the City has developed differently due to the topography of the area. The limits on the size and location of developable properties have resulted in development of more single-family housing compared with other parts of the City.
- Disproportionate housing need related to cost burden and overcrowding is experienced by Hispanic households. Overcrowding is not geographically isolated, instead, a disproportionate need among Hispanic households exists. In comparison to other populations, Hispanics may have large families and live in multigenerational households. Although Hispanics experience disproportionate needs regarding overcrowding, the City's affordable housing stock serves this population group well. California Tax Credit Allocation Committee data race and ethnicity data for the occupants of three affordable housing developments: Las Brisas Community Housing; Las Brisas II; and Gundry Hill (now Zinnia Apartments) indicates that Hispanics comprise a higher proportion of the occupants in the three developments than they represent of the City's population.
- Improved housing site conditions: The two affordable housing sites identified in the sites inventory, Orange Bluff and Walnut Bluff, are in the City's Central neighborhood and are centrally located as per the neighborhood name (north of Willow Street). This area has almost no housing but is the closest neighborhood to shopping, and transit service (less than one-half mile) and is also close to medical services and schools. As the transition from oil production to residential uses continues to occur, the City is leading the effort for development of housing that is affordable to lower income households. The existing five affordable housing developments in Signal Hill are in neighborhoods along the southern City boundary. The Las Brisas and Las Brisas II developments are in the Westside neighborhood, Zinnia and Seabreeze Manor are in the Civic Center neighborhood and Signal Hill Village East is in the Southeast neighborhood. This geographic distribution ensures a more equitable distribution of affordable housing and avoids concentration of new affordable housing developments in any single area of the City.

- Exacerbated housing site conditions: All sites are in the same CalEnviroScreen scoring area which has slightly worse environmental quality compared to areas to the east. Opportunities for new housing in areas with good environmental quality are limited as most of the City is identified as having lower environmental quality due in great part to the emissions produced by the vehicles that use the surrounding freeways, as well as the ship traffic and cargo handling equipment in the San Pedro Bay ports.

## FAIR HOUSING PRIORITIES, GOALS AND STRATEGIES

Housing Element law requires that the City list and prioritize fair housing issues and contributing factors. Contributing factors create, contribute to, perpetuate, or increase the severity of fair housing issues, are fundamental to adequate goals and actions, and must be related to the overall analysis. This identification and prioritization of issues must give highest priority to factors that limit or deny fair housing choice or access to opportunity or negatively impact fair housing. Program 5.3 in the Housing Program (Section II) presents a table that shows how fair housing issues, contributing factors, and program actions are connected.

**Proposed****Affirmative Fair Housing Marketing Plan**

- A. *Targeting.*** Identify the segments of the eligible population which are least likely to seek housing without special outreach efforts.
- a. Consider the current racial and ethnic composition of Signal Hill.
  - b. Also consider language barriers and income eligibility requirements.
- B. *Outreach.*** Outline an outreach program which includes special measures designed to attract those groups identified as least likely to seek housing and other efforts designed to attract persons from the total population.
- a. *Community Contacts.* The housing developer must list at least one community organization that serves each group determined to be least likely to seek housing and who has agreed to help the developer in their marketing efforts. In the plan include the name of the contact person, contact information, experience working with the target population as well as the number and language of materials to be provided to such agencies.
  - b. *Media.* The housing developer should specify the particular means of advertising to reach a target group and the reasoning behind the particular type of advertising. Advertisements should include the fair housing logo.
  - c. If the immediate housing market area is not demographically diverse enough to draw applicants considered -least likely to apply|| then an expanded housing market area should be used.
- C. *Indicators.*** State the indicators to be used to measure the success of the marketing program.
- a. Recording information on how an individual learned about the housing and why they decided to seek that housing will provide useful data for the evaluation process.
  - b. In addition, comparing the number of units now occupied by persons previously determined to be -least likely to apply|| and the number of people least likely to apply on the waiting list prior to and after the marketing process is a good starting place for evaluation.
- D. *Staff Training.*** Demonstrate the capacity to provide training and information on fair housing laws and objectives to sales or rental staff.

**APPENDIX C**  
**SITES INVENTORY AND ANALYSIS**

# APPENDIX C

## SITES INVENTORY AND ANALYSIS

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### GOVERNMENT CODE REQUIREMENTS

In Government Code Section 65580(f) the California legislature finds and declares that -

Designating and maintaining a supply of land and adequate sites suitable, feasible, and available for the development of housing sufficient to meet the locality's housing need for all income levels is essential to achieving the state's housing goals ....

Government Code Section 65582.1(a)(3) explains the requirements of an inventory of land:

An inventory of land suitable and available for residential development, including vacant sites and sites having realistic and demonstrated potential for redevelopment during the planning period to meet the locality's housing need for a designated income level, and an analysis of the relationship of zoning and public facilities and services to these sites.

The land inventory must identify sites that –

- Can be developed for housing within the 8-year planning period of 2021 to 2029
- Sufficient to provide for a jurisdiction's share of the regional housing need for each income level – lower, moderate and above moderate

### CRITERIA THAT DETERMINE “ADEQUATE” HOUSING SITES

Several criteria must be satisfied by a site to be deemed “adequate” to accommodate Signal Hill’s share of the RHNA (regional housing needs allocation). For example, sites should be neither too small nor too large and they should be zoned at densities that are appropriate to accommodate the RHNA by income group.

Guidance on how to complete the sites inventory and analysis is provided by HCD in the following Guidebook:

California Department of Housing and Community Development, *Housing Element Site Inventory Guidebook*, June 10, 2020, 44 pages

## Types of Sites

A “site” is a parcel or group of parcels that can accommodate a portion of the City’s RHNA. There are many types of sites including:

- a. Vacant sites zoned for residential use
- b. Vacant sites zoned for nonresidential use that allow residential development
- c. Residentially zoned sites that are capable of being developed at a higher density (non-vacant sites, including underutilized sites)
- d. Sites owned or leased by a city, county, or city and county
- e. Sites zoned for nonresidential use that can be redeveloped for residential use including a program to rezone the site to permit residential use
- f. Pending, approved, or permitted development

All of the sites listed in the City’s inventory are non-vacant. They also require amendments to the General Plan, Zoning Ordinance, and Zoning Map.

## Size of Sites

To be deemed adequate to accommodate housing for lower income households, the size of sites should be neither too small nor too large.

### “Small” Sites Are Inadequate

A parcel smaller than one half acre is considered inadequate to accommodate housing affordable to lower income households, unless the housing element demonstrates development of housing affordable to lower income households on these sites is realistic or feasible.

None of the sites included in the City’s sites inventory are smaller than one half acre.

### “Large” Sites Are Inadequate

Parcels larger than 10 acres, according to HCD, are considered inadequate to accommodate housing affordable to lower income households, unless the housing element demonstrates development of housing affordable to lower income households on such sites was successful during the prior planning period, or there is other evidence that the site is realistic and feasible for lower income housing.

None of the sites included in the City’s sites inventory are larger than 10 acres.

## No Net Loss Law

The “no net loss” law encourages cities to identify in the land inventory sites with a total housing unit capacity that exceeds the RHNA allocation for each income group. HCD provides the following guidance:

To comply with the No Net Loss Law, as jurisdictions make decisions regarding zoning and land use, or development occurs, jurisdictions must assess their ability to accommodate new housing in each income category on the remaining sites in their housing element site inventories. A jurisdiction must

add additional sites to its inventory if land use decisions or development results in a shortfall of sufficient sites to accommodate its remaining housing need for each income category.

To ensure that sufficient capacity exists in the housing element to accommodate the RHNA throughout the planning period, it is recommended the jurisdiction create a buffer in the housing element inventory of at least 15 to 30 percent more capacity than required, especially for capacity to accommodate the lower income RHNA. Jurisdictions can also create a buffer by projecting site capacity at less than the maximum density to allow for some reductions in density at a project level.

Source: California Department of Housing and Community Development, Housing Element Site Inventory Guidebook, June 10, 2020, page 22

## Non-Vacant Sites

The sites currently under consideration to accommodate the lower income RHNA will be considered as “non-vacant” sites because of the existence of oil wells on the sites. The sites also will accommodate more than 50% of the lower income RHNA. Consequently, findings must be made based on substantial evidence that the existing use (oil wells) will be discontinued during the eight-year planning period. The substantial evidence can be in the form of a letter from the land owner that the use will be discontinued.

When a city relies on non-vacant sites, the first step is to demonstrate the existing uses “do not constitute an impediment to additional residential development.” An analysis also must be completed of the City’s track record in facilitating development and market conditions that will encourage new housing development.

The following information is extracted from HCD’s Housing Element Sites Inventory Guidebook.

A vacant site is a site without any houses, offices, buildings, or other significant improvements on it. Improvements are generally defined as development of the land (such as a paved parking lot, or income production improvements such as crops, high voltage power lines, oil wells, etc.) or structures on a property that are permanent and add significantly to the value of the property.

If a housing element relies on non-vacant sites to accommodate 50 percent or more of its RHNA for lower income households, the non-vacant site’s existing use is presumed to impede additional residential development, unless the housing element describes findings based on substantial evidence that the use will likely be discontinued during the planning period. The housing element must include the following:

- As part of the resolution adopting the housing elements, findings stating the uses on non-vacant sites identified in the inventory to accommodate the RHNA for lower income is likely to be discontinued during the planning period and the factors used to make that determination. This can be included in the body or in the recital section of the resolution.

Example: WHEREAS, based on <name factors here (e.g., expiring leases, dilapidated building conditions, etc.)>, the existing uses on the sites identified in the site inventory to accommodate the lower income RHNA are likely to be discontinued during the planning period, and therefore do not constitute an impediment to additional residential development during the period covered by the housing element.

- The housing element should describe the findings and include a description of the substantial evidence they are based on.

In general, substantial evidence includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. An example of substantial evidence that an existing use will likely be discontinued in the current planning period includes:

The property owner provides a letter stating its intention to develop the property with residences during the planning period.

Existing uses will not impede residential development on the identified sites in this inventory as those uses will be discontinued and the City and property owner will spearhead that effort. The City and property owner have created conceptual site plans, oil well remediation plans, and completed a full environmental analysis and report which was reviewed by the State, relevant agencies such as CalGEM, the Department of Toxic Substances Control, the Regional Air Quality Management District, and the public, with no dissenting comments received as of the date of this document.

In 2021, the City reached out to its largest landowner – Signal Hill Petroleum – to initiate the process of working together to identify sites that could be used to accommodate the 6th cycle RHNA. To ensure that the chosen sites could be redeveloped given the size, anticipated development standards, and the need for oil production remediation, site plans for the sites were created and are included in this chapter and in the Environment Impact Report (EIR) prepared for the four 6th Cycle housing sites. This effort ensure that the development capacity envisioned in this sites inventory is realistic and attainable. The City and the owners of the site will address all needed environmental remediation analysis pursuant to the California Environmental Quality Act (CEQA) including and oil well and associated operations remediation for the sites and will make the site available “shovel-ready” to avoid development time delays and cost associated with these efforts. Costs for oil production remediation for the identified sites in this Element will be covered by the City (using Permanent Local Housing Allocation [PLHA] program funding) and property owner funds and will not be passed on to developers of the two 6<sup>th</sup> cycle sites that will accommodate the moderate and lower income RHNA. As a result, the two sites that will accommodate the moderate- and lower-income RHNA (Walnut Bluff and Orange Bluff) will only require ministerial development approval and will see significant development savings due to the City and property owner’s work to prepare the sites including completing all required oil well remediation.

This approach is not new. In the 5<sup>th</sup> cycle, the City was able to meet 100% of its RHNA with a similar approach. Three of the four sites in the 5<sup>th</sup> cycle Element (with a total capacity of 172 units including 72 very low/low-income units) were developed as anticipated and all required oil production remediation. Two of the sites (with a capacity of 28 and 72 units) were owned by either the City or Signal Hill Petroleum.

As the City has always relied on land with oil well production for new development, it is well versed on the requirements needed to use oil production land for housing and has extensive experience working with Signal Hill Petroleum on these efforts. The City has also codified the requirements for development on oil production sites in its municipal code. Title 16: City of Signal Hill Oil and Gas Code regulates the drilling for production, processing, storage and transport by pipeline of petroleum and other hydrocarbon substances, timely and proper well abandonment and well site restoration and removal of oil and gas related facilities, reclamation and remediation of host sites and final disposition of pipelines as well as regulations for development on sites with abandoned oil wells, in compliance with applicable laws and

permits so that these activities may be conducted in conformance with federal, state, and local requirements, and to mitigate the impact of oil-related activities on urban development.

For the Walnut Bluff and Orange Bluff sites, the City of Signal Hill will initiate a Request for Proposal process to identify a developer for the sites and achieve the indicated affordability levels. The City will waive the site plan review process for these sites and make the development process ministerial. The environmental analysis and oil well remediation process will have been completed for all sites (See Program 1.1). Affordable housing projects are exempt from City development impact fees. This is a similar process previously and successfully used by the City to facilitate the construction of 100% of the affordable housing RHNA for the 5th Cycle. The most recent project, Zinnia apartments, with 72 units completed construction in 2018 and is fully occupied.

## Appropriate Zoning

The California Government Code states that if a local government has adopted density standards consistent with the population-based criteria set by State law (20 units per acre for the City of Signal Hill), State HCD is obligated to accept sites with those density standards (20 units/acre or higher) as appropriate for accommodating the jurisdiction's share of regional housing need for lower-income households. Densities for sites at Town Center Northwest (20-35 du/ac), Walnut Bluff (35-45 du/ac), and Orange Bluff (35-45 du/ac) are considered appropriate to accommodate housing for lower-income households consistent with Government Code Section 65583.2(c)(3)(B). However, Town Center Northwest will be used to meet the above-moderate income RHNA as market cost multifamily units are expected to be developed. Walnut Bluff has the appropriate size, density, and capacity to accommodate part of the lower income RHNA yet the site will be used to meet the moderate income RHNA. Orange Bluff also has the appropriate size, density, and capacity to accommodate the lower income RHNA and the site will be used to meet both the lower and moderate income RHNA. Details are provided under each site description and in Table C-1.

Current site zoning does not allow for the level of residential development described in this Element. As such, the City is rezoning the parcels to ensure that appropriate zoning is in place. The zoning will be adopted concurrent to the Housing Element. Rezoning details are included under the site descriptions in this section.

## SITES TO ACCOMMODATE THE RHNA

### Approved Projects

Housing Element law indicates that jurisdictions can take RHNA credit for units approved (entitled or permitted) or built since the start date of the RHNA projection period started on June 30, 2021 and the City can take credit for approved or permitted units since that time. According to City records there have been 8 approved units (single family units), and these are credited toward the above moderate income RHNA (Table C-1).

## ADU Estimates

Consistent with state law, a projection of ADU development during the planning period is included in the site inventory. While it is impossible to predict the number of ADUs that will be developed in the planning period (2021-2029), the City has estimated a level of ADU development that reflects ADU permitting trends for the last three years. The City has seen a steady increase in ADU development and expects a continued increase given the lack of new, affordable housing units in the region and the emerging ease and resources available for ADU development due to new legislation. In 2019, 3 ADUs were permitted, in 2020, 1 ADU was permitted, and in 2021, 5 ADUs were permitted. Based on these trends, it is estimated that 25 ADUs will be permitted during the planning period (average of about 3 ADUs per year). Due to changing legislation and resources, this estimate may be conservative. The projected ADUs are included as credits consistent with HCD guidelines. As part of Housing Element implementation, the City will take actions to foster and facilitate ADU development. The projected ADUs are shown in Table C-1.

## Sites

The City of Signal Hill has identified four sites to address the 6<sup>th</sup> Cycle RHNA of 517 units. The sites were chosen in conjunction with the site owners (Signal Hill Petroleum) with a focus on sites that are expected to be developed during the planning period, the City survey results, and State affordable housing guidance. To ensure that the chosen sites could be redeveloped given the size, anticipated development standards, and the need for oil production remediation, detailed site constraints analyses were conducted including, active and abandoned oil well locations, abandonment records for abandoned oil wells, soils, and geotechnical studies. In addition, conceptual site plans for the sites were created and are included in this chapter.

For all sites identified in this inventory, any wells that will either be abandoned or re-abandoned are noted by the well legend on the bottom right portion of the site plans and shown on the site plans as red circles around the wells to be abandoned and as red squares around the wells to be re-abandoned. These site plans were prepared as directed by the oil operator/property owner based on well log analysis of well conditions for abandonment. In other words, the oil operator chose which wells they were willing to abandon and which they were to keep and designed the conceptual plans from that analysis in full knowledge of the Code requirements under Title 16 of the Municipal Code (Oil and Gas Code). This effort ensure that the development capacity envisioned here is realistic and attainable. Oil well remediation is discussed under Environmental Constraints.

The four sites have a combined capacity of 707 units on a total of 26.9 acres. Detailed descriptions of sites are presented following Table C-1. Exhibit C.1 shows the location of the sites and Table C-3 includes a detailed listing of sites as required by State law.

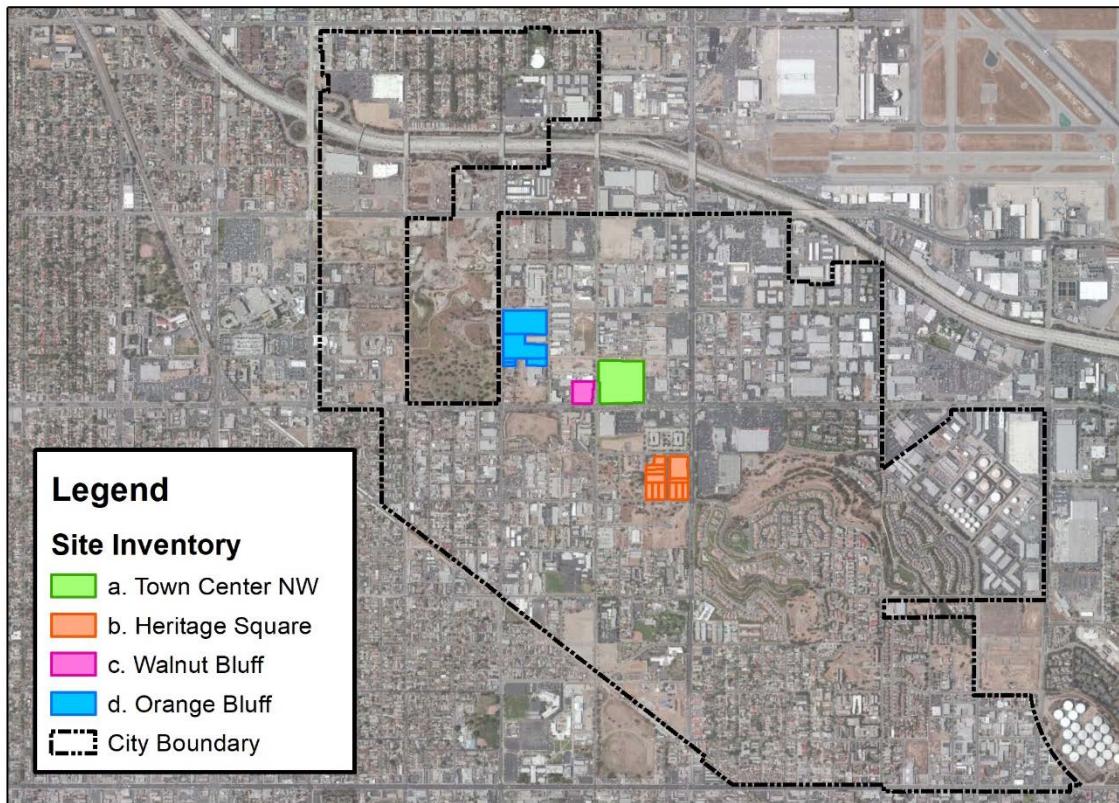
Table C-1 summarizes the sites to adequately accommodate the RHNA.

**Table C-1: Sites Inventory Summary**

Site Name	Ex./Very Low Income (0-50% AMI)	Low Income (50-80% AMI)	Moderate Income (80-120% AMI)	Above Moderate Income (120%+ AMI)	Total
Approved Projects	0	0	0	8	8

ADU Estimates	0	0	0	25	25
a. Town Center Northwest	0	0	0	267	267
b. Heritage Square	0	0	0	60	60
c. Walnut Bluff	0	0	90	0	90
d. Orange Bluff	185	89	16	0	290
<b>Total Site Capacity</b>	<b>185</b>	<b>89</b>	<b>106</b>	<b>360</b>	<b>740</b>
6th Cycle RHNA	161	78	90	188	517
Remaining RHNA (shortfall/+surplus)	+24	+11	+16	+172	

## Exhibit C-1: Sites Inventory Map



### 1. Site Details

#### Town Center Northwest – Above Moderate-Income Site

Town Center Northwest is located northeast of the intersection of E. Willow Street and Walnut Avenue in the Central neighborhood. South and east of the site are developed commercial retail centers named Town Center West and Town Center North. To the north there are light industrial sites.

The single parcel site is approximately 8.4 acres in size. There is one injection well on site with approximately eight active oil and gas wells within a fenced drill site, approximately ten abandoned wells outside of the drill site area, and limited vegetation. The area outside of the fenced drill site is currently

used for storage of oil field related equipment. The site is owned by Signal Hill Petroleum. The conceptual design for the site (which reflects expected development standards for the anticipated specific plan) shows a mixed-use development with most housing located on the northwestern side of the site with retail development along the southern edge fronting on Willow Street. A drilling site will remain on the northeast portion of the site.

A Zoning Ordinance Amendment to the Town Center Northwest (SP-21) Specific Plan will be required to allow a mixed-use commercial and residential project. The rezoning will occur concurrently with Housing Element adoption as such the zoning will be in place upon adoption.

The expected housing capacity is 267 housing units (8.4 acres X 32 du/ac.) based on the high-density residential category of 20 to 35 dwelling units per acre. The site will be used to meet the above-moderate income RHNA as market cost multifamily units are expected to be developed.

### **Heritage Square – Above Moderate-Income Site**

Heritage Square is located near the City center in the Civic Center neighborhood, northwest of the intersection of Cherry Avenue and E. Burnett Street. North of the site is E. Crescent Heights Street and west of the site is Rose Avenue. The Crescent Heights Historic District Residential Specific Plan is directly adjacent to the west. The existing condition on site contains a commercial retail use (local grocer) that will remain as part of the development. There are four active oil and gas wells, six abandoned wells, and limited vegetation. The site is owned by the City and Signal Hill Petroleum. The conceptual design for the 7.83-acre site (which reflects expected development standards for the anticipated specific plan) shows a mixed-use development with 60 housing units. The housing is located on the west portion of the site.

The Land Use Element of the General Plan calls for the area to be re-designated and established as a Central Business District (CBD). Designation of the site to accommodate housing will require a Zoning Ordinance Amendment to the Heritage Square (SP-23) Specific Plan to allow a mixed-use commercial and residential project and a General Plan amendment to CBD which will allow residential development at a density of less than 10 units per acre. The rezoning will occur concurrently with Housing Element adoption as such the zoning will be in place upon adoption.

The expected housing capacity is 60 housing units (7.83 acres X 7.7du/ac.) based on the low-density residential category of less than 10 dwelling units per acre. The site will be used to meet the above-moderate income RHNA based on the site's lower expected development density.

Illustrative site plans for the Town Center Northwest site and the Heritage Square site are included following the sites descriptions. The attached illustrative site plans are conceptual and intended to demonstrate that the housing densities and capacities required by the 6<sup>th</sup> Cycle RHNA listed in the tables are attainable and that the expected development standards for the site will allow for the identified level of development. The acres or site sizes as well as the site layout may ultimately change due to street widening, placement of wells, property ownership, constraints to development, etc.

Site remediation and mitigation measures to remove constraints to development have been identified as part of the CEQA analysis.

## Walnut Bluff

Walnut Bluff is located north of E. Willow Street at 2653 Walnut Avenue. The site is located in the Central neighborhood. The rectangular site borders other commercial development to the east and north, with Walnut Avenue to the east of the site and Willow Street to the south of the site. The single parcel site is 2.0 acres in size. The site is undeveloped but there are currently four active oil and gas wells, three abandoned wells, and limited vegetation. The site is owned by Signal Hill Petroleum. The conceptual design for the site (which reflects expected development standards for the anticipated specific plan) shows a four-story multifamily development.

The Land Use Element of the General Plan calls for the area to be re-designated and established as a Very High Density Residential (35 to 45 du/ac). Designation of the site to accommodate housing will require a Zoning Ordinance Amendment to the Special Purpose Housing Specific Plan (SP-7) to allow a residential project. The rezoning will occur concurrently with Housing Element adoption as such the zoning will be in place upon adoption.

The expected housing capacity is 90 housing units (2 acres X 45 du/ac.) and will include open space. Although the site has the appropriate size, density, and capacity to accommodate part of the lower income RHNA, the site will be used to meet the moderate income RHNA. For the Walnut Bluff and Orange Bluff sites, the City of Signal Hill will use a Request for Proposal process to identify a developer for the sites and achieve the indicated affordability levels. The City will waive the site plan review process for these sites and make the development process ministerial. The environmental analysis and oil well remediation process will have been completed for all sites (See Program 1.1). The City will enter into development agreements to guide development of all four sites as presented in this Housing Element and include a commitment to oil production remediation in the agreements. Affordable housing projects are exempt from City development impact fees.

## Orange Bluff

Orange Bluff is located in the Central neighborhood adjacent to the City boundary south of East 28<sup>th</sup> Street between Orange Avenue and, extending just south of where East 27th Street dead ends into the property from the east. Development north and east of the site are mostly commercial office and light industrial sites, with a few intermittent vacant sites. Development to the southeast of the site is residential and commercial. The two-parcel site is 8.62 acres and is undeveloped but is intersected by light industrial and commercial development. The site is owned by Signal Hill Petroleum. The conceptual design for the site (which reflects expected development standards for the anticipated specific plan) shows a three and four-story multifamily development. However, the adopted Special Purpose Housing Specific Plan (SP-7) will allow up to five-stories.

The Land Use Element of the General Plan calls for the area to be re-designated and established as a Very High Density Residential (35 to 45 du/ac). Designation of the site to accommodate housing will require a Zoning Ordinance Amendment to the Special Purpose Housing Specific Plan (SP-7) to allow a residential project. The rezoning will occur concurrently with Housing Element adoption as such the zoning will be in place upon adoption.

The expected housing capacity is 290 housing units and will include open space. The site has the appropriate size, density, and capacity to accommodate all of the lower income RHNA and some of the moderate-income units. The units are distributed proportionately in Table C-3.

To ensure that the appropriate site was used to meet the lower income RHNA, the City looked at a variety of potential sites in Signal Hill. Seven neighborhoods comprise the City.

- North End
- Atlantic/Spring
- Central
- West Side
- Civic Center
- Hilltop
- Southeast

Table C-2 lists the five affordable housing developments which are located in three of the seven neighborhoods.

**Table C-2: Affordable Housing Developments: 2021**

Development Name	Neighborhood	Number of Units
Las Brisas Community Housing 2399 California Avenue	Westside	92
Las Brisas II 2400-2420 California Avenue	Westside	60
Zinnia Apartments 1500 E. Hill Street	Civic Center	72
Sea Breeze Manor 2067 Alamitos Avenue	Civic Center	24
Signal Hill Village East 1800-1844 Junipero Ave	Southeast	16

Potential sites in the North End, Atlantic/Spring, and Hilltop Neighborhoods were not deemed appropriate to accommodate the lower income housing need for the following reasons:

- North End: small lots and built out
- Atlantic/Spring: isolated from city services, abandoned oil wells, oil field facilities, earthquake fault
- Hilltop North Slope: steep and unstable slopes and earthquake fault

After evaluating several parcels and illustrative site plans, it was decided that the Orange Bluff offered the best location to accommodate the lower income housing need and part of the moderate-income need. Orange Bluff is in the Central neighborhood adjacent to the City boundary south of East 28<sup>th</sup> Street between Orange Avenue and, extending just south of where East 27th Street dead ends into the property from the east Development north and east of the site are mostly commercial office and light industrial sites, with a few intermittent vacant sites.

The two-parcel, 8.62-acre site is undeveloped but there are currently active, idle and plugged wells. Part of the undeveloped site is used for car storage for an auto dealership. Scattered about the site are remnants of previous developments including foundations, and paved areas, with limited vegetation.

The conceptual design for the site (which reflects expected development standards for the anticipated specific plan) shows a three- and four-story multifamily development. The site plan shows the site size at just over nine acres. This estimate includes the center parcel, which is developed and will not be part of the development and is not reflected in the site inventory table. For the Walnut Bluff and Orange Bluff sites, the City of Signal Hill will use a Request for Proposal process to identify a developer for the sites and achieve the indicated affordability levels. The City will waive the site plan review process for these sites and make the development process ministerial. The environmental analysis and oil well remediation process will have been completed for all sites (See Program 1.1). The City will enter into development agreements to guide development of all four sites as presented in this Housing Element and include a commitment to oil production remediation in the agreements. Affordable housing projects are exempt from City development impact fees.

State law, and HCD guidance, state that sites must have the appropriate zoning to accommodate the identified site capacity once the planning period has begun. If sites used to address the lower-income RHNA (extremely/very low- and low-income sites) require rezoning and occur after the planning period has begun, those sites are subject to additional requirements under State law. Housing Element law (Government Code 65583.2[h]) requires that the sites that are:

- Zoned to permit owner-occupied and rental multifamily residential use by right for developments in which at least 20 percent of the units are affordable to lower-income households during the planning period; and
- Permit at least 16 units per site at a density of at least 20 units per acre

Also, at least half of the very low- and low-income housing need must be accommodated on sites designated for residential use and for which nonresidential uses or mixed-uses are not permitted, except that a city or county may accommodate all the very low- and low-income housing need on sites designated for mixed-uses if those sites allow 100 percent residential use and require that residential use occupy 50 percent of the total floor area of a mixed-use project.

In this sites inventory, these provisions apply to the Orange Bluff site. The Orange bluff site complies with these provisions as it allows for a density of 35 to 45 units per acre, has an estimated capacity over 16 units, and is a 100% residential site.

Sites to accommodate the moderate- and above moderate-income RHNA are not subject to these requirements.

The illustrative site plans for the Walnut Bluff and Orange Bluff sites and a parcel-specific listing for all sites are included following this discussion.

## Exhibit C-2: Orange Bluff



PROJECT SUMMARY		
Area:	8.62 ac	
Total Unit:	290 du	
Density	32 du/ac	
Unit Size Average	758 sf	
Net Rentable Area	219,800 sf	
Amenity	5,000 sf	

3 & 4 STORY TUCK UNDER		
Plan Type	Mix	SF
1 Bed	(45%)	550
2 Beds	(27%)	850
3 Beds	(28%)	1,000
Total	(100%)	219,800

Required Parking		
1 Bed (45%)	130x0.5/du	= 65 spaces
2 Beds (27%)	78x1/du	= 78 spaces
3 Beds (28%)	82x2/du	= 164 spaces
Total		= 307 spaces

Provided Parking		
Garage		= 131 spaces (43%)
Open Parking		= 176 spaces (57%)
Total		= 307 spaces

**Exhibit C-3: Walnut Bluff****PROJECT SUMMARY**

Area:	2.0 ac
Total Unit:	90 du
Density	45 du/ac
Unit Size Average	768 sf
Net Rentable Area	69,150 sf

4-STORY Plan Type	Mix	SF	Count
1 Bed	(41%)	550	37
2 Beds	(31%)	850	28
3 Beds	(28%)	1,000	25
Total	(100%)	69,150	90

Required Parking		
1 Bed (41%)	37x0.5/du	= 19 spaces
2 Beds (31%)	28x1/du	= 28 spaces
3 Beds (28%)	25x2/du	= 50 spaces
Total		= 97 spaces

Provided Parking		
Garage		= 36 spaces (37%)
Open Parking		= 62 spaces (63%)
Total		= 98 spaces

## Exhibit C-4: Town Center Northwest



## PROJECT SUMMARY

Site Area - Gross	8.4 AC
Site Area - Commercial	3.4 AC
Site Area - Potential Oil Operations Area	0.4 AC
Site Area - Residential	4.0 AC
R.O.W.	0.6 AC
Total Unit	267 DU
Gross Density:	29.0 du/ac

## Commercial Summary

Retail	5,000 SF
Restaurant	13,000 SF
Brewery/Distillery Manufacturing	3,000 SF
Tasting Room	1,000 SF
Outdoor Dining Area	4,000 SF
Total	26,000 SF

## Parking Required Commercial Site:

Retail (1/250SF)	20 spaces
Restaurant (1/100SF)	130 spaces
Brewery/Distillery Manufacturing (1/100SF)	3 spaces
Tasting Room (1/100SF)	10 spaces
Outdoor Dining Area (1/100SF)	40 spaces
<b>Total</b>	<b>203 spaces</b>

## Provided Commercial Site:

Surface Parking	219 spaces
-----------------	------------

## 5- Story Residential Summary

Plan	Beds	SF	Unit %	Total SF
P1a	1	700	97 36%	67,900
P1b	1	740	100 37%	174,000
P2	2	1080	70 27%	115,000
<b>Total</b>	<b>267</b>			<b>356,900</b>

## Required Parking:

1 Beds:	197x1.4/du	= 276 spaces
2 Beds:	70x1.6/du	= 112 spaces
Guest:	267x0.25/du	= 67 spaces
<b>Total</b>		<b>= 455 spaces</b>

## Provided Parking

Surface Parking	= 30 spaces
Garage L1	= 120 spaces
Garage L2	= 126 spaces
Garage L3	= 126 spaces
Garage L4	= 55 spaces
<b>Total</b>	<b>= 457 spaces</b>

## Wells on SHP Property:

Active Well	3
Idle Well	7
Abandoned Well	4
Active Injector Well	1
To Be Abandoned	9
To Be Re-Abandoned	1

## Exhibit C-5: Heritage Square

**PROJECT SUMMARY**

Site Area - Gross	7.80 AC
Site Area - Retail	4.42 AC
Site Area - Residential	3.38 AC
Total Dwelling Units	60 Units
Density	17.8 DU/AC

Commercial Summary	
Existing Mother's Market:	14,000 SF
Retail:	5,450 SF
Restaurant:	7,500 SF
Food Stall (Take-Out)	5,100 SF
Common Dining Area	16,350 SF
Total	48,400 SF

3-Story Townhome Summary	
Plan 1 - 2 bdr, 2.5 bath, 1,250 sf	16 DU
Plan 2 - 3 bdr, 3.5 bath, 1,900 sf	30 DU
Plan 3 - 4 bdr, 3.5 bath, 2,100 sf	8 DU
Total	54 DU

50x80 Single-Family with ADU	
Plan 1 - 3 bdr, 3 bath, 1,600 sf Main Unit, 600 sf ADU	3 DU
Plan 2 - 3 bdr, 3 bath, 2,000 sf Main Unit, 600 sf ADU	3 DU
Total	6 DU

## Parking Required Per Anticipated Specific Plan

Required Commercial Site:	
Mother's Market (E)	78
Retail 5,450 SF (1/250SF)	22
Restaurant 7,500 SF (1/100SF)	75
Food Stall/Take-Out 5,100 SF (1/250SF)	21
Common Dining Area 14,250 (1/200 SF)	72
Sub-Total	268

## Provided Commercial Site:

Surface Parking	186
Commercial On-Street Parking	6
Total Provided	192

## Required Residential Site:

2 & 3 bdr - 46 DU (2.25/DU)	103.5
4 bdr - 14 DU (3.25/DU)	45.5
Sub-Total	149

## Provided Residential Site

Residential Garages	120
Residential On-Site Parking	28
Residential On-Street Parking	16
Total Provided	164

## Rose Avenue On-Street Parking

Active Well	4	To Be Abandoned	11
Idle Well	9	To Be Re-Abandoned	4
Abandoned Well	8		

**Table C-3: Detailed Sites Inventory**

Site Name	Affordability Category	APN	Location	Size (acres)	Allowed Density (du/ac)	Realistic Capacity	Existing Use	General Plan designation	Current Zoning	General Plan Designation at Adoption	Zoning at Adoption	Lot Consolidation	Ownership
Town Center Northwest	Above Moderate	7212-011-034	E. Willow St. and Walnut Ave.	8.4	20-35	267	Non vacant site with active and abandoned oil wells	3.1 Town Center	SP 6-Commercial Corridor Specific Plan	3.1 Town Center	SP 24- Town Center Northwest Plan	N/A	SH Petroleum
Heritage Square	Above Moderate	7214-005-900	E. Burnett and Gardenia Ave.	0.5	<10	5	vacant	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	city owned
Heritage Square	Above Moderate	7214-005-901	south of Crescent Heights St. b/w Rose Ave. and Gardena Ave	0.4	<10	3	idle oil well	1.1 Low Density Residential	SP 11-Crescent Heights Historic District Specific Plan/ CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	city owned
Heritage Square	Above Moderate	7214-005-902	Crescent Heights St. and Gardena Ave.	0.4	<10	3	plugged oil well	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	city owned
Heritage Square	Above Moderate	7214-005-903	south of Crescent Heights St. b/w Rose Ave. and Gardena Ave	0.4	<10	3	idle oil well and plugged oil well	1.1 Low Density Residential/ 3.1 Town Center	SP 11-Crescent Heights Historic District Specific Plan/ CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	city owned

**Table C-3: Detailed Sites Inventory**

Site Name	Affordability Category	APN	Location	Size (acres)	Allowed Density (du/ac)	Realistic Capacity	Existing Use	General Plan designation	Current Zoning	General Plan Designation at Adoption	Zoning at Adoption	Lot Consolidation	Ownership
Heritage Square	Above Moderate	7214-005-904	north of E. Burnett St. b/w Rose Ave. and Gardena Ave.	0.8	<10	8	plugged oil well	1.1 Low Density Residential/ 3.1 Town Center	SP 11-Crescent Heights Historic District Specific Plan/ CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	city owned
Heritage Square	Above Moderate	7214-005-010	E. Burnett St. and Rose Ave.	0.5	<10	4	active oil well	1.1 Low Density	SP 11-Crescent Heights Historic District Specific Plan	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	SH Petroleum owned
Heritage Square	Above Moderate	7214-005-011	Burnett St. b/w Rose Ave and Gardena Ave.	0.5	<10	4	idle well	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	SH Petroleum owned
Heritage Square	Above Moderate	7214-006-019	north of E. Burnett St. b/w Gardena Ave. and Cherry Ave.	0.4	<10	3	Non vacant site with idle and plugged wells	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	SH Petroleum owned
Heritage Square	Above Moderate	7214-006-020	Cherry Ave. and Burnett St.	0.4	<10	3	Non vacant site with idle and plugged wells	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	SH Petroleum owned
Heritage Square	Above Moderate	7214-006-014	E. Burnett St. between Gardena	0.5	<10	4	Non vacant site with idle and plugged wells	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage	yes - owned by City and SH Petroleum	SH Petroleum owned

**Table C-3: Detailed Sites Inventory**

Site Name	Affordability Category	APN	Location	Size (acres)	Allowed Density (du/ac)	Realistic Capacity	Existing Use	General Plan designation	Current Zoning	General Plan Designation at Adoption	Zoning at Adoption	Lot Consolidation	Ownership
			Ave. and Cherry Ave.								Square Specific Plan		
Heritage Square	Above Moderate	7214-006-015	E. Burnett St. & Gardena Ave.	0.5	<10	4	vacant	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	SH Petroleum owned
Heritage Square	Above Moderate	7214-006-021	Crescent Heights St. and Cherry Ave.	1.7	<10	16	Market (will remain as part of the development)	3.1 Town Center	CTC-Commercial Town Center	3.1 Town Center	SP23-Heritage Square Specific Plan	yes - owned by City and SH Petroleum	SH Petroleum owned
Walnut Bluff	Moderate	7212-010-038	2653 Walnut Avenue	2	35-45	90	Nonvacant site with active, idle and plugged oil wells	3.4 Commercial Industrial	CI - Commercial Industrial	1.4 Very High Density Residential	Special Purpose Housing Specific Plan (SP-7) – Area VII	N/A	SH Petroleum
Orange Bluff	Very Low/Low/Moderate Income	7212-008-049	Orange Ave & E. 28th St	4.6	35-45	290 units (185 Very Low, 89 Low, 16 Moderate Income)	active, idle and plugged wells	4.2 General Industrial	GI - General Industrial	1.4 Very High Density Residential	Special Purpose Housing Specific Plan (SP-7) – Area VIII	yes - both parcels owned by SH Petroleum	SH Petroleum
Orange Bluff	Very Low/Low/Moderate Income	7212-008-051	Orange Ave & E. 28th St	3.7	35-45		active, idle and plugged wells	4.2 General Industrial	GI - General Industrial	1.4 Very High Density Residential	Special Purpose Housing Specific Plan (SP-7) – Area VIII	yes - both parcels owned by SH Petroleum	SH Petroleum
Orange Bluff	Very Low/Low/Moderate Income	7212-010-010	Orange Ave & E. 28th St	0.6	35-45		active, idle and plugged wells	4.2 General Industrial	CI - Commercial Industrial	1.4 Very High Density Residential	Special Purpose Housing Specific Plan	yes - both parcels owned by SH Petroleum	SH Petroleum

**Table C-3: Detailed Sites Inventory**

Site Name	Affordability Category	APN	Location	Size (acres)	Allowed Density (du/ac)	Realistic Capacity	Existing Use	General Plan designation	Current Zoning	General Plan Designation at Adoption	Zoning at Adoption	Lot Consolidation	Ownership
											(SP-7) – Area VIII		
Orange Bluff	Very Low/Low/Moderate Income	7212-010-019	Orange Ave & E. 28th St	0.2	35-45		active, idle and plugged wells	4.2 General Industrial	CI - Commercial Industrial	1.4 Very High Density Residential	Special Purpose Housing Specific Plan (SP-7) – Area VIII	yes - both parcels owned by SH Petroleum	SH Petroleum
Orange Bluff	Very Low/Low/Moderate Income	7212-010-020	Orange Ave & E. 28th St	0.2	35-45		active, idle and plugged wells	4.2 General Industrial	CI - Commercial Industrial	1.4 Very High Density Residential	Special Purpose Housing Specific Plan (SP-7) – Area VIII	yes - both parcels owned by SH Petroleum	SH Petroleum
Notes:													
<ul style="list-style-type: none"> <li>Capacity for the 209-unit Orange Bluff site is not provided at the parcel level. Capacity on the site is divided among three affordability levels making parcel-specific capacity estimates inaccurate.</li> <li>Acreage for the Heritage Square site may deviate from site plan acreage as the parcel data does not include right-of-way vacation of Gardena Avenue.</li> </ul>													

## Lower Income Housing Sites and Site Amenities

The Tax Credit Allocation Committee/Low Income Housing Tax Credit (TCAC/LIHTC) site location criteria are referred to as site amenities and include proximity to:

- Transit stops
- Public park or community center
- Book lending public library
- Full scale grocery store/supermarket
- Neighborhood market
- Weekly farmer's market
- Public elementary, middle, high school
- Medical clinic or public hospital
- Pharmacy

Signal Hill is a compact community and site amenities are located in close proximity to the Orange Bluff site. For example:

- Long Beach Transit Bus Line 71 stops along Orange and Willow
- Willow Springs Park is located 2745 Orange Avenue immediately across from Orange Bluff
- Signal Hill Library is located at 1770 E. Hill Street
- Food4Less is located at 1600 E. Willow within walking distance of Orange Bluff
- Signal Hill Elementary School is located at 2285 Walnut Avenue
- Long Beach Memorial Medical Center is located at 2880 Atlantic Avenue
- A pharmacy is located within the Medical Center

City staff is familiar with the site amenity criteria having filled out the Local Review Agency Project Evaluation Form for Gundry Hill, which was awarded tax credits in 2015 (CA 15-062). The same staff member reviewed the proximity of the Orange Bluff site to the site amenities and determined that the maximum 15 points would be awarded.

Gundry Hill (now Zinnia Apartments) was awarded the maximum site amenity points possible.

## Special Purpose Housing Specific Plan

Goals for development within the Area Three (Orange Bluff) Special Purpose Housing Specific Plan (SP-7) include the following:

- Designate land at densities that can accommodate the City's share of the regional need for lower income housing.
- Facilitate access to opportunity that is available from public schools, public transit, and jobs proximity in housing developments located in a Moderate Resource Neighborhood, as defined by the California Tax Credit Allocation Committee.
- Support the development of housing to meet diverse needs which include, but are not limited, to families, school district employees and special needs populations such as seniors, veterans, disabled (e.g., hearing and visually impaired), homeless students, and emancipated foster youth.
- Provide for the development of a variety of housing unit sizes including micro-units, studios, and one-, two- and three-bedroom units.

## LOCATION OF LOWER INCOME HOUSING SITES IN RELATION TO HOUSING OPPORTUNITY NEIGHBORHOODS

The TCAC/HCD Opportunity Mapping Tool is based on 12 indicators of access to opportunity. Table C-4 describes the Housing Opportunity Mapping Indicators and Measures.

Neighborhoods – meaning census tracts – located within the Los Angeles Region are designated into one of the following six resource categories of access to opportunity.

- Highest
- High
- Moderate
- Moderate (Rapidly Changing)
- Low
- High Segregation & Poverty

All sites identified as accommodating the RHNA are located in census tract 5734.02, which TCAC/HCD describes as a “moderate” resource neighborhood.

**Table C-4: California TCAC/HCD Housing Opportunity Mapping Indicators and Measures: 2021**

Indicator	Measure
Poverty	Percent of the population with incomes above 200% of the federal poverty level
Adult Education	Percent of adults with a bachelor's degree or above
Employment	Percent of adults age 20-64 who are employed in the civilian labor force or in the armed forces
Job Proximity	Number of jobs filled by workers with less than a BA that fall within a given radius (determined by the typical commute distance of low wage workers in each region) of each census tract population weighted centroid
Median Home Value	Value of owner-occupied units
CalEnviroScreen	CalEnviroScreen 3.0 Pollution Indicators
Math Proficiency	Percentage of 4 <sup>th</sup> graders who meet or exceed math proficiency standards
Reading Proficiency	Percentage of 4 <sup>th</sup> graders who meet or exceed literacy standards
High School Graduation Rates	Percentage of high school cohort that graduate on time
Student Poverty Rate	Percent of students not receiving free or reduced-price lunch
Poverty	Tracts with at least 30% of the population falling under the federal poverty line
Racial Segregation	Tracts with a racial Location Quotient of higher than 1.25 for Black, Hispanic, Asian, or all people of color in comparison to the county

Source: California Fair Housing Task Force, *Methodology for the 2020 TCAC/HCD Opportunity Map*, December 2020, pages 6 and 7

## CUMULATIVE IMPACT OF DEVELOPMENT STANDARDS

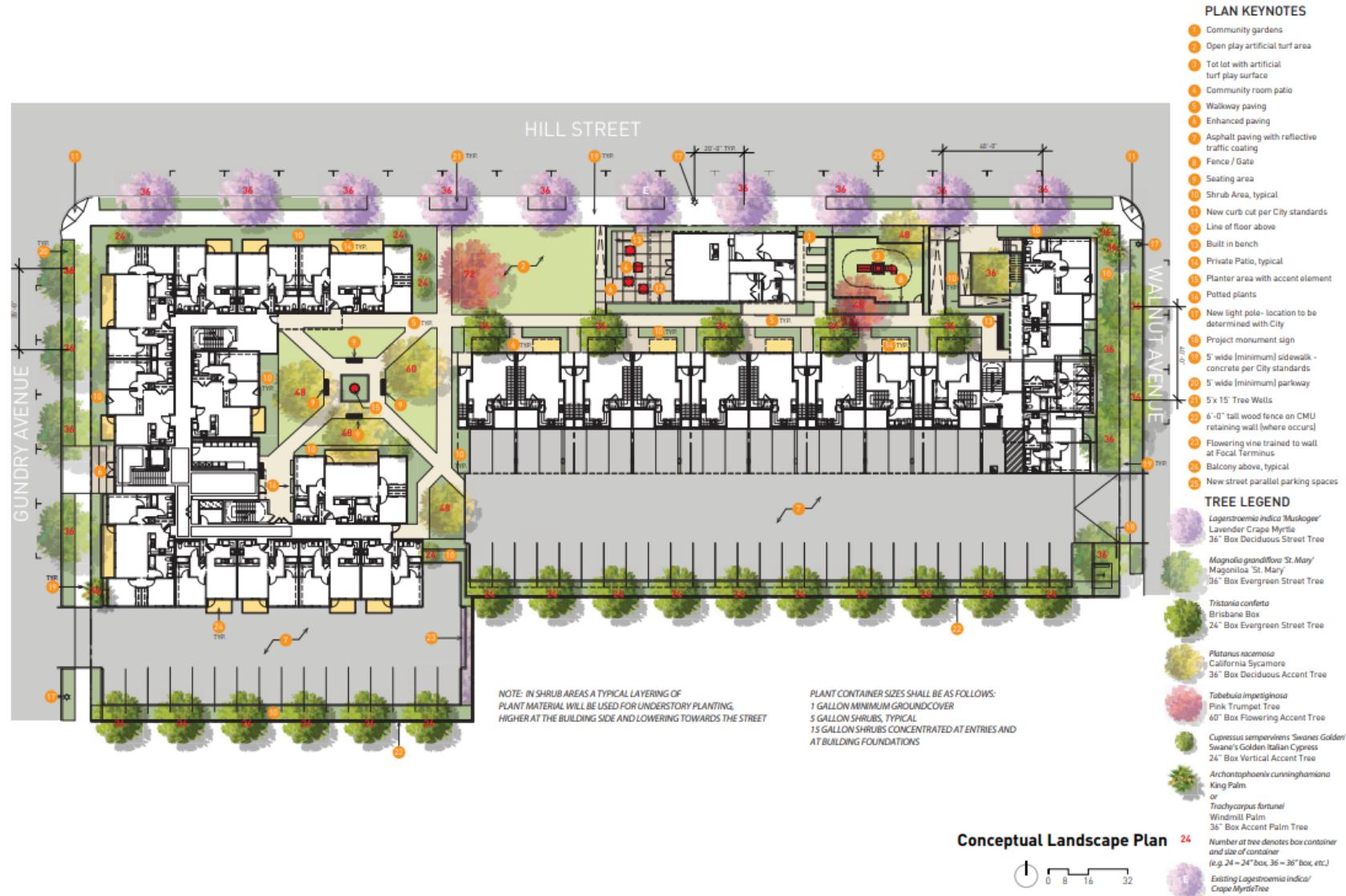
Each site has unique development standards regarding, for example, building heights and parking. Standards to be used for the two, lower-income sites are modeled on the most recent affordable housing development in the City (included in Table C-5 for comparison). The City intends to allow a mix of 3 and 4 story buildings in Orange Bluff.

**Table C-5: Expected Development Standards for Sites**

Standard:	SP 6 Zinnia Apartments, META Housing Corp. 2018 (Affordable development example)	Expected Development Standards			
		SP 7 (Walnut Bluff)*	SP 7 (Orange Bluff)*	Town Center NW	Heritage Square
<b>Site size</b>	1.6 acres	2.0 acres	8.6 acres	8.4 acres	7.8 acres
<b>Uses permitted</b>	Multifamily residential	Multifamily residential	Multifamily residential	Mixed Use	Mixed Use
<b>Number of Housing Units</b>	72 units	Minimum: 90 units	Minimum 290 units	Maximum: 267 units	Maximum: 60 units
<b>Affordability</b>	Low-Income	Moderate-Income	Low- and Moderate-income	Above moderate income	Above moderate income
<b>Density</b>	45 du/ac	35 to 45 units per acre	35 to 45 units per acre	20 to 35 units per acre	<10 units per acre.
<b>Housing Unit Sizes</b>	1-, 2- and 3-bedroom units	1-, 2-, and 3-bedroom units	1-, 2-, and 3-bedroom units	1- and 2-bedroom units	2-, 3-, and 4-bedroom units
<b>Height Limits</b>	48 feet	4 stories or 48 feet	3 and 4 stories or 48 feet	5 stories or 60 feet	3 stories or 38 feet 6 inches
<b>Parking</b>	82 spaces: • 0.5 for 1 bedroom 1 for 2 bedrooms 2 for 3 bedrooms 0.5 for 1 bedroom 1 for 2 bedrooms 2 for 3 bedrooms	Total 97 spaces: • 0.5 spaces per 1-bedroom units • 1 space per 2-bedroom units • 2 spaces per 3-bedroom units • Covered parking is not required.	Total 308 spaces: • 0.5 spaces per 1-bedroom units • 1 space per 2-bedroom units • 2 spaces per 3-bedroom units • Covered parking is not required.	Total 600 spaces: • 1.4 garage spaces per 1-bedroom units • 1.6 garage spaces per 2-bedroom units • 2 garage spaces per 3+ bedroom units • 1 guest space per 4 units (can be surface parking)	Total 149 spaces: 2 garage spaces per 1- to 3-bedroom units 3 garage spaces per 4- and 5-bedroom unit Townhome units: 1 guest space per 4 units (can be surface parking)

Source: City of Signal Hill, 2022

## Exhibit C-6: Zinnia Apartments.



## AVAILABILITY OF INFRASTRUCTURE

Development of the housing sites would require the replacement of old and installation of new utility infrastructure to serve the proposed new uses. The installation of infrastructure would occur during site construction and the depths and locations would be considered in the grading plan.

Off-site, local connections to the existing municipal storm drain, water, and wastewater facilities, as well as electricity lines and natural gas mains within the surrounding roadways would be required to support residential development on the housing sites.

Connections to existing water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunication facilities exists within the City and surrounding the housing sites.

Signal Hill sanitary sewers connect to the City of Long Beach sewer line, which flows into regional wastewater facilities maintained by the Los Angeles County Sanitation District 29. Since population growth from full development of the housing sites is consistent with the growth projections for the Los Angeles County, it is expected that the additional wastewater flow associated with the development of the Housing Sites can be accommodated within existing and already planned facilities.

Based on the population increase, the anticipated housing developments would increase the local water usage by approximately 372 AF by 2029, resulting in a water demand of 2,469 AF in 2029 from full build out of the Housing Sites, which is within the service capacity of 4,369 AF.

## DRY UTILITIES

Dry utility providers include:

- Internet      Frontier Communications and Spectrum
- Telephone     Frontier Communications and Spectrum
- Electricity    Southern California Edison
- Natural Gas   Long Beach Gas

## ENVIRONMENTAL CONSTRAINTS

The City has authorized environmental site assessments for each of the identified housing sites. This work has included Phase I Environmental Assessments to determine whether soil contamination is present; Methane Gas Summary Reports and Phase II Environmental Assessment Reports to evaluate the extent and severity of contamination; and Human Health Risk Assessments (HHRAs) to estimate the nature and probability of adverse health effects in humans. The site reconnaissance included excavation and drilling on the four Housing Sites. Soil matrix samples were collected and tested. All drilling, logging and sampling activities were conducted by or under direct supervision of a California Professional Geologist, and in accordance with California Well Standards presented in the Department of Water Resources (DWR). In this manner, the City has developed a thorough understanding of the environmental constraints of each of the sites as well as recommended mitigation measures to allow for a clear path to development.

Existing uses will not impede residential development on the identified sites as those uses will be discontinued and the City and property owner will spearhead that effort. The City and property owner

have created conceptual site plans, oil well remediation plans, and environmental analysis. In 2021, the City reached out to its largest landowner – Signal Hill Petroleum – to initiate the process of working together to identify sites that could be used to accommodate the RHNA. To ensure that the chosen sites could be redeveloped given the size, anticipated development standards, and the need for oil production remediation, site plans for the sites were created and are included in this chapter. This effort ensure that the development capacity envisioned in this sites inventory is realistic and attainable. The City and the owners of the site will address all needed oil well remediation for the site and will make the site available “shovel-ready” to avoid development time delays and cost associated with these efforts. Costs for oil production remediation for the identified sites in this Element will be covered by the City and property owner and will not be passed on to developers of the two 6th cycle sites that will accommodate the moderate and lower income RHNA. This approach is not new. In the 5th cycle, the City was able to meet its RHNA with a similar approach. Three of the four sites in the 5th cycle Element (with a total capacity of 172 units including 72 very low/low-income units) were developed as anticipated and all required oil production remediation. Two of the sites (with a capacity of 28 and 72 units) were owned by either the City or Signal Hill Petroleum.

For all sites identified in this inventory, any wells that will either be abandoned or re-abandoned are noted by the well legend on the bottom right portion of the site plans and shown on the site plans as red circles around the wells to be abandoned and as red squares around the wells to be re-abandoned. These site plans were prepared as directed by the oil operator/property owner based on well log analysis of well conditions for abandonment. In other words, the oil operator chose which wells they were willing to abandon and which they were to keep and designed the conceptual plans from that analysis in full knowledge of the Code requirements under Title 16 of the Municipal Code (Oil and Gas Code). Oil production remediation for the Town Center Northwest and Heritage Square above moderate-income sites will be a negotiated cost/benefit agreement between the City and the Owner/Oil Operator. The four sites identified in the 6<sup>th</sup> cycle inventory will use a development agreement to outline the needed remediation and development of the site consistent with what is presented in this Housing Element. Oil remediation will not prevent the four identified sites from being developed as all are owned by one entity (oil operator and land developer) who has identified these sites for development and has a long track record of working with the City. The City is entering into development agreements for all four sites and the sites owner has committed to remediation of all four which is their common practice. Development agreement negotiation includes costs of environmental assessment, mitigation, and zoning for all four sites. The sites owner intends to maintain ownership of the above moderate-income sites and to develop those as described in this Element. The sites owner will give land to City for the two affordable sites to market to affordable developers. This approach is not new, the same approach was used in the 5<sup>th</sup> cycle Housing Element and all sites were developed during the planning period and 100% of the 5<sup>th</sup> cycle RHNA was attained.

As the City has always relied on land with oil well production for new development, it has codified the requirements for those sites in its municipal code. Title 16: City of Signal Hill Oil and Gas Code regulates the drilling for production, processing, storage and transport by pipeline of petroleum and other hydrocarbon substances, timely and proper well abandonment and well site restoration and removal of oil and gas related facilities, reclamation and remediation of host sites and final disposition of pipelines in compliance with applicable laws and permits so that these activities may be conducted in conformance with federal, state, and local requirements, and to mitigate the impact of oil-related activities on urban development.

The findings of the technical studies, and the mitigation measures proposed, are included in the EIR that has been prepared for the new Housing Element. Key findings are as follows:

## Geology and Soils

**Faulting and seismicity:** The candidate housing sites are not located within a State of California Earthquake Fault Zone (EFZ; formerly known as an Alquist-Priolo Special Studies Zone), and there are no known active, potentially active, or inactive faults trending through the candidate housing sites. The nearest known fault is the Cherry Hill fault segment of the NIFZ (south Los Angeles Basin section-southern). The far southwestern portion of the Orange Bluff candidate housing site is located within the vicinity of the Cherry Hill fault, a major segment of the NIFZ, which lies approximately 250 feet away. The southwest portion of the Heritage Square candidate housing site is located within the vicinity of the Cherry Hill fault, approximately 200 feet away. There are no known faults within and/or immediately adjacent to the Walnut Bluff or Town Center North candidate housing sites, as the Cherry Hill fault occurs approximately 500 to 700 feet to the southwest. The potential for surface rupture resulting from the movement of nearby major faults, or currently unknown faults, is considered low.

**Landslides:** The proposed candidate housing sites have ground surfaces from relatively flat to gently sloping and are not located immediately adjacent to steep terrain. Geologic hazards associated with landslides are not anticipated at the sites. The site is not located within an area identified by the CGS as having potential for seismic slope instability.

## Hazards and Hazardous Materials

The city of Signal Hill lies within the Long Beach Oil Field. The City's legacy of oil production began in 1919 when oil was first discovered. The Long Beach Field is termed a mega giant field. It is the eighth-largest by cumulative production in California, and although now largely depleted, still officially retains around 5 million barrels of recoverable oil. The field was enormously productive in the 1920s, with hundreds of oil derricks covering Signal Hill and adjacent parts of Long Beach. Even with the dramatic land use changes over the decades since its discovery, it remains moderately productive, with oil wells and oilfield infrastructure intermixed with commercial and residential development. Oil wells are an important consideration when developing in the City of Signal Hill. Active or inactive oil wells may affect what can be developed because of fire code access and setback requirements. Most remaining vacant land in the city is vacant because of related oil well issues. The City and developers working in the City understand that oil production was Signal Hill's mainstay until declining oil prices reduced production in the 1970s. In 1974 the Signal Hill Redevelopment Agency was formed, and the city focused on economic development and diversity from oil. Many new developments in the City require oil well and pipeline mitigation measures and the City and local developers are experienced in oil well remediation. Since 2014, there have been eight development projects have been undertaken that required remediation of oil extraction activities including four residential projects. One 25-unit development, Crescent Square, required preparation of well abandonment reports and methane barriers/mitigation.

### ***Existing Site Conditions***

- **Orange Bluff:** There are 20 oil wells onsite, nine are previously abandoned, six are idle and four are active. Numerous pipelines underlie Orange Avenue, East 28th Street, Gundry Avenue and East 27th Street, effectively surrounding the Site. Several of these pipelines are owned by entities no longer in business and therefore more than likely are abandoned.
- **Walnut Bluff:** Seven oil wells (two operating, two idle and three previously abandoned), associated piping runs and aboveground storage tanks are/were located onsite. Several of these

pipelines are owned by entities no longer in business and therefore more than likely are abandoned.

- Town Center Northwest: the site contains three operating units, six idle units and ten abandoned oil wells used for storage of oil field equipment. Numerous pipelines underlie Walnut Avenue and East Willow Street. Several of these pipelines are owned by entities no longer in business and therefore more than likely are abandoned.
- Heritage Square: There are 25 oil wells on the 7.14-acre Site. Oil derricks, sumps and aboveground storage tanks were previously located onsite. There is no evidence hazardous materials are stored, used, spilled or dumped on the Housing Site and there are no recognized environmental conditions onsite or adjacent to the Site.

### ***Mitigation Measures***

Hazards and hazardous materials mitigation measures for the housing sites include the following:

1. Future construction on the Housing Sites would require the preparation of a soil management plan (SMP) prior to commencement of ground disturbing activities as approved by the SCAQMD would be completed prior to construction activities.
2. Previously abandoned oil wells should be located, daylighted and methane gas leak tested prior to the installation of vent cones and vent risers pursuant to the City of Signal Hill's Oil and Gas Code §16.24.030 and §16.24.040.
3. Idle wells should be located, daylighted and abandoned in accordance with the State of California Department of Conservation, Geologic Energy Management Division (CalGEM) requirements and in accordance with the City of Signal Hill's Oil and Gas Code §16.22 and §16.24.
4. Abandoned pipelines should be located, daylighted and removed in accordance with the Soil Management Plan.
5. Institutional controls, i.e., a methane mitigation system to be installed subslab of any proposed buildings, pursuant to the City of Signal Hill's Oil and Gas Code §16.24.080 will effectively mitigate risks and hazards due to vapor intrusion to negligible conditions ensuring the site is safe for any future intended use including as a residential property.
6. If an impervious surface paving area is 5,000 square feet or greater and contiguous to the proposed buildings, the paving should have vents spaced less than 100-ft apart consisting of four-sided concrete boxes with traffic rated grates and 4" thick gravel blanket at the base. The vents should be designed to prevent surface water infiltration.

**APPENDIX D**  
**GOVERNMENTAL CONSTRAINTS ANALYSIS**

# APPENDIX D

## GOVERNMENTAL CONSTRAINTS ANALYSIS

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### A. SCOPE OF THE GOVERNMENTAL CONSTRAINTS ANALYSIS

Government Code 65583(a)(5) requires -

An analysis of potential and actual governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the *types of housing* identified in paragraph (1) of subdivision (c), and *for persons with disabilities* as identified in the analysis pursuant to paragraph (7), including *land use controls, building codes and their enforcement, site improvements, fees and other exactions required of developers, local processing and permit procedures, and any locally adopted ordinances that directly impact the cost and supply of residential development*. The analysis shall also demonstrate *local efforts to remove governmental constraints that hinder the locality from meeting its share of the regional housing need* in accordance with Section 65584 and from meeting *the need for housing for persons with disabilities, supportive housing, transitional housing, and emergency shelters* identified pursuant to paragraph (7). [Emphasis added]

Government Code Section 65583(c)(1) identifies the “types of housing” that must be permitted by the City’s Zoning Ordinance:

- Multifamily rental housing
- Factory-built housing
- Mobile homes
- Housing for agricultural employees
- Supportive housing
- Single-room occupancy units
- Emergency shelters
- Transitional housing

Government Code Section 65583(a)(7) requires –

An analysis of any special housing needs, such as those of ...persons with disabilities, including a developmental disability.

In addition to the previously mentioned types of housing, Government Code Sections 65852.2 and 65852.22 provide for the creation of accessory dwelling units (ADUs) and junior accessory dwelling units (JADUs).

Finally, Government Code Section 65660 et. seq. requires that local jurisdictions allow “low barrier navigation centers” by right in areas zoned for mixed use and in non-residential zones permitting multifamily residential uses, if they meet the requirements specified in Government Code Section 65662.

The Government Code requirements provide an outline for the governmental constraints analysis as follows:

- Zone Districts Permitting a Variety of Housing Types (Part B)
- Land Use Controls - Residential Zones (Part C)
- Land Use Controls – Specific Plans (Part D)
- Building Codes and Their Enforcement (Part E)
- On- and Off-Site Improvements (Part F)
- Fees and Other Exactions (Part G)
- City Processing and Permit Procedures (Part H)
- Analysis of Adopted Ordinances that Directly Impact the Cost and Supply of Housing (Part I)
- Description of Efforts to Remove Governmental Constraints that Hinder the City from Meeting its Share of the Regional Housing Need (Part J)
- Description of Efforts to Remove Governmental Constraints that Hinder the City from Meeting Special Housing Needs (Part K)

In order to address governmental constraints, Program 3.3 is a comprehensive Zoning Ordinance Amendments Program that will encompass the following actions:

- Update Zoning Ordinance Definitions
  - Employee Housing
  - Low Barrier Navigation Center
  - Qualified Supportive Housing Development
  - Senior Citizen
  - Senior Housing Development
- Update Uses Permitted in the Residential Districts
  - Employee housing in zones permitting single family homes
  - Large family day care homes in the multifamily districts (AB 234)
- Update Uses Permitted in the Commercial Zones
  - Low barrier navigation centers in the CR Zone

Appendix D – Governmental Constraints – describes in detail the need for the Zoning Ordinance amendments:

## ZONING DISTRICTS PERMITTING A VARIETY OF HOUSING TYPES

Table D-1 lists the housing types permitted in the residential and commercial zones.

**Table D-1: Zone Districts Permitting a Variety of Housing Types**

Uses	RL	RLM-1	RLM-2	RH	CG
Multifamily Rental Housing	X	X	X	P	X

**Table D-1: Zone Districts Permitting a Variety of Housing Types**

Uses	RL	RLM-1	RLM-2	RH	CG
Factory Built Housing	P	P	P	P	X
Mobile Homes	P	P	P	P	X
Supportive Housing	P	P	P	P	X
Single Room Occupancy	X	X	X	C	X
Emergency Shelters	X	X	X	X	P
Transitional Housing	P	P	P	P	X
Housing for Ag Employees	P	P	P	P	X

X = Prohibited

C = Conditional Use Permit Required P = Permitted

Note: land use designations are described on the next page Source: City of Signal Hill Zoning Ordinance

Emergency shelters are permitted in the CG Commercial General District, a district intended to provide for a wide variety of service and retail uses, many of which are highway oriented.

## LAND USE CONTROLS – DEVELOPED SPECIFIC PLANS

Thirteen Specific Plans have been adopted to guide residential development. Development has been completed in the first 12 Specific Plans listed in Table D-2. The Summerland Residential Specific Plan is under construction (February 2021).

Due to its compact nature, unique topographic features, oil wells, limited land supply and diverse housing needs, the City has employed specific plans rather than traditional zoning. The City has had much success with this approach in particular as it relates to the development of affordable housing. In the 5th RHNA cycle, the City was able to meet the full lower income RHNA using this approach. Because Signal Hill Petroleum and the City own most large pieces of developable land and all these properties have oil extraction facilities (pumps, wells, etc.) the Specific Plan process ensure not only that development occurs as envisioned in the General Plan and Housing Element but that all environmental (soil) issues are addressed. The Specific Plan approach also facilitates adjustment in developments standards for affordable or special needs housing. For example, Specific Plans for affordable housing developments include significant parking reductions, reduced setback requirements, increased height limitations, increased densities, and increase or elimination of lot coverage regulations. This development approach results in high development certainty on land that would most likely not transition to residential uses without City intervention.

Table C-5 in Appendix C identifies the expected development standards for the four sites included in the Sites Inventory. This information is also referenced in Program 1.1. Standards to be used for the two, lower-income sites are modeled on other affordable housing development. The most recent affordable housing development in the City, the 72-unit Zinnia Apartments developed constructed in 2018 (and included in Table C-5 for comparison). It is important to note that Signal Hill has managed to complete construction of and have full occupancy in 100% of the 5th Cycle lowest income housing RHNA category.

## LAND USE CONTROLS – DEVELOPED AFFORDABLE HOUSING SPECIFIC PLANS

Specific plans have guided the development of the five affordable housing developments listed in Table D-3. The Zinnia Apartments' development standards guided the Specific Plans for the Orange Bluff and Walnut Bluff sites which are described in Appendix C.

**Table D-2: Description of Developed Residential Specific Plans**

Specific Plan	Location	Acres	Developed Residential Uses
SP-2 Hilltop Area	21st Street to the South Burnett Street to the West and Temple Avenue/Hill Street to the East	125 ac.	174 detached SFDs 28 condos duplex units four-plex units
SP-5 California Crown	Northeast and southeast corners of Temple Avenue and 20th Street	16.8	94 SFDs
SP-8 Signal Hill East Village	PCH between railroad R-O-W to the west and Junipero to the east	2.75 ac.	40 SFDs
SP-9 Bixby Ridge	Temple Avenue and Panorama Drive to the West and Orizaba Avenue south of Hill Street, Obispo and Hathaway Avenues to the east northeast to the south by Hill Street, and to the north by Panorama Drive	39.4 ac.	187 SFDs
SP-11 Crescent Heights Historic District	South of 25th Street, North of Creston Avenue, East of Walnut Avenue and West of Gardena Avenue	16.3 ac	10 existing residential units
SP-13 Cherry Avenue Corridor Residential	East side of Cherry Avenue between 19th and 20th Streets		10 triplex buildings 5 detached SFDs
SP-14 Hathaway Ridge Residential	West side of Obispo Avenue near the intersection of Palm Ave	2.16 ac.	18 detached SFDs
SP-15 Cityview Residential	Orizaba Avenue South of 19th Street	3.14 ac.	81 townhomes
SP-16 Villagio Residential	Eastside of Gundry Avenue south of E. Willow Street	1.15 ac.	11 detached SFDs
SP-17 Crescent Square Residential	NEC Walnut Avenue and Crescent Heights Street	3.18 ac.	28 SFDs
SP-18 Pacificwalk Residential	Orizaba north of Pacific Coast Hwy	2.25 ac.	44 detached dwelling units
SP-20 Freeman Heights Residential	Between Freeman Avenue and Obispo Avenue	2.6 ac.	19 SFDs
SP-22 Summerland Residential	North side of 23rd Street between Orange Ave and Walnut Ave	.96 ac.	16 detached SFDs

Source: City of Signal Hill Zoning Ordinance & Specific Plans

**Table D-3: Description of Developed Projects in Special Purpose Housing Specific Plan (SP-7)**

Area	Location	Size	Affordable Housing Development
One	NEC Gaviota and Alamitos Avenue	1.2 ac.	Eucalyptus/Sea Breeze Manor 24 multifamily dwellings for disabled persons
Two	NEC Pacific Coast Highway and Junipero Avenue	1 acre	5 single family dwellings inclusionary housing units included in the development
Three	Reserved		
Four	West of California Avenue, south of 25th Street, north of old Pacific Electric R-O-W	5.42 acres	Las Brisas 96 multifamily dwellings family housing
Five	California Avenue between Burnett and Willow Streets	1.42 acres	Las Brisas Community Housing 60 multifamily dwellings family housing
Six	South of Hill Street between Gundry and Walnut Avenues	1.61 Acres	Zinnia Apartments 72 multifamily dwellings family housing

Source: City of Signal Hill Zoning Ordinance

## LAND USE CONTROLS – RESIDENTIAL ZONES

Housing supply and cost are greatly affected by the amount of land designated for residential use and the densities at which development is permitted.

The 2001 Land Use Element of the City's General Plan sets forth policies for guiding local development. These policies, together with existing zoning regulations in the Municipal Code, establish the amount and distribution of land to be allocated for different uses within the City.

To increase transparency and certainty in the development application process as required by law, the City has a variety of tools available for developers. The City's Community Development Department home page has links to the City's online land use plans (General Plan, Specific Plans, and Zoning Ordinance) as well as helpful information related to current planning efforts such as new developments standards, the update to the General Plan Housing Element, and the comprehensive Project Development Guide, updated annually. Direct links are also provided below:

- General Plan: <https://www.cityofsignalhill.org/85/General-Plan>
- Housing Element Update: <https://www.cityofsignalhill.org/98/Planning>
- Zoning map and residential development standards: <https://www.cityofsignalhill.org/105/Zoning>
- Information on permitting: <https://www.cityofsignalhill.org/99/Applications>
- Current fee schedules for permits and plan checks, departmental fees, and development impact fees: <https://www.cityofsignalhill.org/115/Fees>
- Project Development Guide:  
<https://www.cityofsignalhill.org/DocumentCenter/View/2829/Project-Development-Guide>

To assist property owners and potential developers in identifying the type of improvements required for a specific type of projects, the City has created a Project Development Guide (2021) intended as a guide for developers of new buildings or large additions to existing buildings. The guide contains information on constraints to development in the City of Signal Hill such as oil wells, contaminated soils and seismic

hazards, as well as cost considerations including developer impact fees, public works improvements, street widening dedication requirements and plan check and building permit fees. The Guide includes an overview of the planning process, leading to project entitlement and concludes with submittal requirements for Building, Grading and Street Improvement plan check and estimates on permit fees including developer impact fees for water, traffic, parks and schools. The guide is located on the City's website at <https://www.cityofsignalhill.org/DocumentCenter/View/2829/Project-Development-Guide>

## Density, Lot Sizes and Lot Area Per Unit

Table D-4 shows the minimum lot size and density of the four residential zones. Housing density ranges from 8 to 21 dwelling units per acre. Affordable housing developments, however, have been constructed at a density of 42 and 45 dwellings per acre (Special Purpose Housing Specific Plan (SP-7), see Table D-3). The four sites included in the Sites Inventory will allow up to 35 to 45 units per acre for the two lower income sites (Orange Bluff and Walnut Bluff). The two sites identified to accommodate the above-moderate income RHNA will range in density from 20 to 35 units per acre for the Town Center Northwest Site to up to 10 units per acre for the Heritage Square site. Table C-5 in Appendix C identifies the expected development standards for the four sites included in the sites inventory. Standards to be used for the two, lower-income sites are modeled on the most recent affordable housing development in the City (included in Table C-5 for comparison).

**Table D-4: Dwelling Unit Density and Lot Area**

Residential Zone	Lot Sizes (Sq. Ft.)	Lot Area Units/Sq. Ft.	Dwelling Units Per Acre
RL	Any Size	1/5,000	8
RLM-1	Any Size	1/6,000	7
RLM-2	Any Size	1/2,500	17
RH	<10,000	1/2,900	15
RH	10,000-20,000	1/2,400	18
RH	>20,000	1/2,100	21

Source: City of Signal Hill Zoning Ordinance

## Lot Sizes and Dimensions

Table D-5 describes lot sizes and dimensions for each zone. The standards are customary for a suburban community. However, the standards have not been employed on the City's newer neighborhoods, which have been approved through a specific plan process which

**Table D-5: Lot Area and Dimensions**

Residential Zone	Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Depth
RL	5,000	55	90
RLM-1	6,000	50	120
RLM-2	5,000	50	100
RH	6,000	50	120

Source: City of Signal Hill Zoning Ordinance

## Parking Requirements

Parking requirements for single-family dwellings and duplexes require that all parking be located in a garage. The requirements for SFDs and duplexes are:

Number of Bedrooms	Number of Stalls
3 or fewer	2
4 and 5	3
6 or more	4

For multi-family dwellings consisting of more than two dwellings on a single parcel, the standards are:

Number of Bedrooms      Number of Stalls

Number of Bedrooms	Number of Stalls
Studio, 1 and 2	2
3 or more	2 + 1 space per bedrooms over 2 (1 space per bedrooms over 2 shall be in a garage or assigned surface parking on the project site) Guest parking is also required at a 1:4 ratio and can be surface parking

A minimum of two multi-family parking spaces must be in a garage; however, the additional parking may be surface parking. As an example, a 3-bedroom unit must have 2 enclosed parking spaces; however, the third parking space may be provided through assigned parking.

The following discussion demonstrates that the enclosed parking requirement in the RH Zone has not adversely impacted housing capacity or the cost of multi-family housing and that the City has reduced parking standard to facilitate the development of affordable housing. Multi-family housing in high density developments is permitted only in the RH Zone, a zone devoted to the development of high-density neighborhoods, and in Special Purpose Housing Specific Plan (SP-7) areas. In the RH Zone nine units can be constructed on a 20,000 square foot lot (2,100 square feet per unit). Nine 2-car garages are required for a development of nine 2-bedroom units. Each garage must have 400 square feet. The RH Zone parking requirements pose no physical constraints to the development of lots in the RH Zone that meet the minimum lot sizes. The maximum residential densities are achievable within the framework of parking standards, lot size, setback, F.A.R. and lot coverage standards.

Table D-6 shows examples of residential development in the RH Zone. All developments were able to meet the parking requirements; no parking variances were requested. The parking standards have not had a negative impact on the supply of housing. The recent multifamily developments have provided the required off-street parking within the framework of the lot sizes and maximum densities.

**Table D-6: Development Examples in the RH Zone**

<b>Assessor Parcel Number</b>	<b>Lot Size (Sq. Ft.)</b>	<b>Number of Dwelling Units</b>	<b>Lot Area Per Dwelling Unit</b>
7211-026-042 to 076	45,302	35	1,294
7211-026-078 to 159	150,718	82	1,822
7211-030-060 to 086	63,162	27	2,339
7211-030-088 to 098	29,705	11	2,700
7216-021-016 to 045	39,500	30	1,317
7216-021-046 to 127	100,188	82	1,222
7215-007-018 to 061	77,101	44	1,752
7215-004-042 to 67	41,710	26	1,604
7215-003-024 to 050	55,440	27	2,053
7215-017-010 to 036	36,210	27	1,341
7215-015-040	73,500	15	4,900
7215-019-022	23,840	28	851
7215-019-027 to 083	71,010	57	1,246
7215-019-084 to 133	55,757	50	1,115
7215-018-041 to 057	30,314	17	1,010
7215-018-010 to 037	38,768	30	1,292
7214-009-016 to 137	322,780	122	2,646
7214-009-139 to 242	215,186	104	2,069
7214-021-002 to 057	80,150	56	1,431
7216-018-036 to 053	23,958	18	1,331
7216-019-039, 041 and 052	27,100	28	968
7216-019-058 to 074			
7216-019-076 to 084			
7216-019-086 to 100	26,760	15	1,784
7216-020-079 to 121	70,568	43	1,641
7216-020-031 to 060	39,590	30	1,320
7216-020-062 to 077	20,657	16	1,219
7216-002-026 to 046	34,630	21	1,649

Source: Los Angeles County Assessor Maps, real estate property profiles and land use surveys

In the Las Brisas II and 1500 Hill Street (Zinnia Apartments) Special Purpose Housing Specific Plan (SP-7) areas, the City enacted reduced parking standards to facilitate the production of affordable housing. The parking standards in these two areas are as follows:

- For studio and 1 bedroom units the standard is reduced from 2 parking spaces to 0.5 spaces per dwelling unit
- For 2-bedroom units the standard is reduced from 2 parking spaces to 1 space per dwelling unit
- For 3-bedroom units the standard is reduced from 3 parking spaces to 2 parking spaces per dwelling unit
- At least 40% of the parking spaces must be provided in carports; the remaining 60% can be provided through surface parking
- There is no requirement for enclosed parking spaces

While current standards are not, in the City's view, a constraint to housing development (particularly for the site included in the sites inventory), the City does acknowledge that many new developments have benefited from modified parking standards. The City uses the Specific Plan process to guide the physical

development of land that otherwise may be hindered by certain combinations of site constraints, including the presence of oil extraction facilities. The Specific Plan approach also facilitates adjustment in development standards for affordable or special needs housing or for other site-specific characteristics. For example, Specific Plans may include significant parking reductions. Table C-5 in Appendix C identifies the expected development standards for the four sites included in the Sites Inventory. This information is also referenced in Program 1.1. All four sites are expected to have lower parking requirements compared to the parking standards in the City's zoning code. The City will review the residential parking standards in the zoning code and make needed adjustments (see Program 3.3). The City's aims for parking standards that are consistent but also take into consideration the varying needs and characteristics of the City's neighborhoods. For affordable housing developments, the City will continue using parking standards that are equal to or lower than what is required by state law.

## Height Limits

Height limits include 2 and ½ stories, 3 stories and 4 stories.

The height limit in areas with a zoning designation of RL, RLM-1, RLM-2 and RH is 25 feet or 2 and ½ stories. All areas having these zoning designations – save one – have already been developed.

Signal Hill is unlike many southern California communities. Most of the City is not zoned in the traditional zoning categories of low density, medium density and high density. Due to its compact nature, unique topographic features, oil wells, limited land supply and diverse housing needs, the City has employed specific plans rather than traditional zoning. Thus, the 2 and ½ story height limit applies only to a portion of the residentially zoned land.

Areas of the City that have three story high developments include:

- Pacific Walk
- Hathaway Ridge
- Villagio
- Crescent Square

Areas of the City that have four story high developments include:

- Las Brisas II
- City View
- Zinnia Apartments

In recognition that height limits higher than permitted by the residential zones can contribute to affordable housing, the City Council has approved four-story height limits. These approvals have not been achieved by a waiver of the development standards in the RH or high-density multi-family residential zone. Instead, the City's Zoning Ordinance allows the City Council to adopt specific plans with development standards – such as height limits and parking requirements – unique to the site and purpose of the development.

The City Council approved a four-story height limit for the affordable Las Brisas II rental housing complex. The Las Brisas II affordable housing project was approved via a "Special Purpose Housing Specific Plan." The City Council also approved a four-story height limit for the Zinnia

Apartments. The lower income sites at Orange Bluff and Walnut Bluff have a 4-story building height limit. In these two areas, a 5-story height limit is permitted subject to the approval of the Community Development Director.

As noted in the preceding paragraph, this zoning designation allows the City to create a specific plan of land use – including appropriate development standards such as height limits – for a specific site. The “Special Purpose Housing Specific Plan” can be applied to other sites in order to prepare height, parking and other development standards unique to a site and the purpose of the development. While current standards are not, in the City’s view, a constraint to housing development (particularly for the site included in the sites inventory), the City does acknowledge that many new developments have benefited from modified height limits. The City uses the Specific Plan process to guide the physical development of land that otherwise may be hindered by certain combinations of site characteristics, including the presence of oil extraction facilities. The Specific Plan approach also facilitates adjustment in developments standards for affordable or special needs housing or for other site-specific characteristics. For example, Specific Plans may include taller height limits. Table C-5 in Appendix C identifies the expected development standards for the four sites included in the Sites Inventory. This information is also referenced in Program 1.1. All four sites in the sites inventory are expected to have higher height limits compared to the height standards in the City’s zoning code. The City will review the residential height limits in the zoning code and make needed adjustments (see Program 3.3). The City’s aims for residential building height standards that are consistent but also take into consideration the varying needs and characteristics of the City’s neighborhoods.

## **Lot Coverage Ratios, Floor Area Ratios and Housing Unit Sizes**

The lot coverage ratios in areas with a zoning designation of RL, RLM-1, RLM-2 and RH shall not exceed the standard of 50% of the lot area of the lot.

The floor area ratio is a maximum of .50 in the RL, RLM-1 and RLM-2 districts. The gross floor area includes the area in the first floor and any additional floors for all structures, in addition to garages, greenhouses and accessory buildings on the lot. Floor area applies not only to the ground floor area but also to any additional stories or basement of said structure.

Section 20.10.115 of the Zoning Ordinance does not specify a maximum floor area ratio for the RH Zone.

As previously noted, the Zoning Ordinance includes Chapter 20.41 SP-7 Special Purpose Housing Specific Plan. There are five areas so designated. There are no predetermined lot coverage ratios or floor area ratios for these areas. All development is subject to meeting the standards outlined in the site plans approved for the six areas.

The Zoning Ordinance establishes no minimum housing unit standards.

## **Setbacks**

According to the Zoning Ordinance, building setback means the minimum distance between any property line and the closest point of the foundation of any building or structure on the property. Table D-7 shows the setbacks for the four residential zones. As previously stated, the standards have not guided the

development of the City's newer neighborhoods, which have been approved through a specific plan process.

## Open Space Requirements

With respect to open space requirements, in the RLM-2 district, the minimum requirement is 600 square feet per unit with minimum dimensions of ten feet by ten feet. In the RH district, the open space requirement is 25% of the lot area after right-of-way dedication.

## Accessory Dwelling Unit Ordinance

The City is in the process of preparing its ADU ordinance. The ordinance will be consistent with the requirements and standards of State law and HCD guidance.

**Table D-7: Setback Requirements for Residential Zones**

Residential Zone	Lot Area (Sq. Ft.)	Front Setback	Rear Setback	Interior Setback	Street Setback
RL	All Lots	20	5	5	10
RLM-1	Lots in Block V Lots 16-76	10	5	5	10
	All Other Lots	20	15	5	10
RLM-2	All Lots	20	5	5	10
RH	Less than 10,000	15	5	5	10
	10,000-20,000	20	5	5	10
	Greater than 20,000	20	10	5	10

Source: City of Signal Hill Zoning Ordinance

## Orange Bluff, Walnut Bluff, Town Center Northwest and Heritage Square Development Standards

Appendix C describes the development standards associated with each of the sites identified as accommodating the above moderate-, moderate-, and lower-income housing needs. In addition, Appendix C includes illustrative site plans that demonstrate the housing capacity of each site is achievable given the cumulative impacts of the development standards.

## BUILDING CODES AND ENFORCEMENT

HCD guidance indicates -

The element must describe the building code adoption and enforcement process, including identification of any local amendments to the Uniform Building Code (UBC) and how building code enforcement is carried out by the jurisdiction.

The City adopted the California Building Code in December 2019.

- This code will be specific to single-family dwellings, duplexes and townhomes.
- Fire suppression system (sprinklers) will be required in these occupancies.

Also, California adopted the 2010 California Green Building Standards Code. The City's amendments included deleting Chapter 13 Energy Efficiency and amending the fee structure, re-roofing requirements, and grading requirements.

According to Health and Safety Code Section 17920:

Enforcement means diligent effort to secure compliance, including review of plans and permit applications, response to complaints, citation of violations, and other legal process.

... enforcement may, but need not, include inspections of existing buildings on which no complaint or permit application has been filed...

The City implements a Building and Housing Code enforcement program. Enforcement of these codes has resulted in the repair of substandard housing and the demolition of deteriorated housing. California Health and Safety Code Section 17920.3 defines the conditions that constitute a "substandard building." The substandard housing conditions include, but are not limited, to:

- Inadequate sanitation
- Structural hazards
- Defective wiring, plumbing and mechanical equipment
- Faulty weather protection.

The City's proactive enforcement is not a constraint to the appropriate maintenance of the existing housing stock.

The California Building Code, as noted, was adopted by reference with only minor variations. The cost of new housing is not adversely impact by the adopted amendments. The City's codes are considered to be the minimum necessary to protect the public health, safety and welfare. The Codes, which are based on the State Housing Law and uniform codes, are adopted by many cities throughout southern California and do not pose a constraint to residential development.

## **ON-SITE AND OFF-SITE IMPROVEMENT REQUIREMENTS**

HCD guidance indicates :-

The element must also describe and analyze the impact of on- and off-site improvement standards including street widths, curb, gutter, and sidewalk requirements, landscaping, circulation improvement requirements and any generally applicable level of service standards or mitigation thresholds.

Developers of residential subdivisions in Signal Hill are required to construct streets, curbs, gutters, sidewalks, sewers, water lines, street lighting and trees in the public right-of-way within and adjacent to a subdivision. These facilities are then dedicated to the City, which is responsible for maintenance. On- and off-site improvements add to total cost of developing housing, but are costs associated with the provision of infrastructure and services necessary for the health and safety of the public. Because residential development cannot take place without the addition of adequate infrastructure, site improvement requirements are not seen as a constraint to the development of housing.

The majority of the residential areas in the City are built out. Most of the vacant housing sites and areas in Signal Hill have unique site conditions such as topography, steep slopes, petroleum extractions, and locations near or adjacent to the Alquist-Priolo Special Studies Earthquake Fault Zone. For many of these housing areas, the City has used specific plans to establish standards for street widths, curb requirements and circulation improvements.

Site improvement requirements vary depending on the existing condition of each project but due to the built-out nature of Signal Hill, all areas are already served with infrastructure. The narrative below describes the specific requirements regarding public works improvements, underground utilities, water meter plan check, sanitation, and streets:

Public Works Improvements – projects must dedicate land for street and alley widening as shown on the Official Plan Lines Map, and construct or repair curb, gutter, sidewalks and pave to the centerline of all streets and alleys adjacent to the development parcel if they exceed the valuation level (adjusted annually). In addition, developers are responsible for construction or upgrading of sewer and water mains, storm drains, streetlights, fire hydrants, street trees and street signs. Construction is required concurrent with project development and a performance bond for the construction must be obtained before the issuance of building permits. In certain situations where construction is infeasible, the City may accept an in lieu fee equal to the cost of construction.

Underground Utilities – The City has established an underground utility district. When feasible, the City requires under grounding of existing overhead utilities. Undergrounding is not required for high-voltage power lines or when utility poles located “off- site” (not located on the development site). Under grounding of utility services is required from a utility pole located on the site to the new building.

Water Meter Plan Check – To assure the correct sizing of water meters, the City requires a water plan for new development projects. Projects must be sized in conformance with the California Plumbing Code. A plan showing the fixture count and estimated domestic, fire and irrigation systems demand may be required.

Sanitation – Projects that require a new connection to the public sewer must pay a sewer connection fee to the Los Angeles County Sanitation District. Permits must be obtained before the issuance of City building permits.

Streets – The General Plan Circulation Element’s identifies the City’s circulation infrastructure and includes a hierarchy consisting of five classifications: principal arterials, minor arterials, collector streets, local streets, and alleys. The Plan Lines Map displays the City’s desired future right-of-way width for all roadways and alleys. The map describes the extent of right-of-way dedications required by the City as a condition of the issuance of building permits. The Plan Lines Map shows the City’s desired street plan but the specific timing or phasing of future roadway development is a function of the marketplace and the City’s Capital Improvement Program. The required street width construction for a typical subdivision would most likely range from a 60-foot right of way for local streets up to 110-foot right-of-way for a principal arterial. Flexibility on streets width requirements is allowed within Specific Plans.

The improvement requirements described above have been applied to existing housing as well as all residential developments under construction and approved for development. To assist property owners and potential developers in identifying the type of improvements required for a specific type of projects, the City has created a Project Development Guide (2021) intended as a guide for developers of new buildings or large additions to existing buildings. It contains information on constraints to development in the City of Signal Hill such as oil wells, contaminated soils and seismic hazards, as well as cost considerations including developer impact fees, public works improvements, street widening dedication requirements and plan check and building permit fees. The Guide includes an overview of the planning process, leading to project entitlement and concludes with submittal requirements for Building, Grading and Street Improvement plan check and estimates on permit fees including developer impact fees for water, traffic, parks and schools.

## FEES AND EXACTIONS

This part describes and quantifies permit, development, impact and other fees imposed on housing development. The fees are estimated for typical single- and multi-family developments. Exactions imposed on developers also are described.

### City Planning Fees

#### Service Fees

There are deposit fees for services. Table D-8 presents a schedule of service fees and charges.

Deposits are used to pay for actual costs of obtaining mailing labels for public notices, postage for mailing notices, public notice publication in local newspaper, landscape consultant, plan check, traffic or environmental engineer consultant, City Attorney legal services beyond typical public hearings and report review, and other actual out-of-pocket consulting fees incurred by the City.

Planning staff time for report preparation, project meetings and site inspections is billed at \$104 per hour. The initial deposits are estimates of the costs and hours anticipated for project review. A larger initial deposit may be required for projects that include an environmental impact report, general plan amendment, zoning ordinance amendment, specific plan, conditional use permit, variance, etc.

**Table D-8: Schedule of Service Fees and Charges**

Residential	Initial Deposit
New single-family or duplex dwellings when view analysis is not required	\$5,000.00
New single-family or duplex dwellings with view analysis	\$6,000.00
Multi-family and tract developments fewer than 10 dwellings	\$8,000.00
Multi-family and tract developments more than 10 dwellings	\$12,000.00
Other planning applications, including parcel map, parcel map waiver, lot line adjustments, etc.	\$4,000.00

Applicants are notified if the initial deposit becomes insufficient to pay for costs billed against the deposit. Before project approval, the applicant's deposit account must be adequate to pay for associated project costs. Upon final project approval, excess deposits will be refunded to the applicant.

Planners will provide free consultation regarding zoning issues and provide preliminary plan review (up to three hours) at no cost to the applicant to identify zoning or site plan and design review issues before formal submittal of plans and the initial deposit. Applicants are encouraged to work with their architects and engineers to submit complete plans of sufficient detail to assure the City and its consultants can perform complete plan review.

### User Charges and Fees

The City periodically reviews its user charges and fees for services and utilities to ensure that they are consistent with costs incurred by the City. With passage of Assembly Bill 1600, City staff has examined various fee structures to ensure that fees charged are consistent with the cost of providing the respective services. Water rates, for example, were increased so that the water system is no longer subsidized from the General Fund, but rather pays its own way.

### Plan Check Fees

Plan check fees for both Building and Safety and Public Works applications are charged based strictly on the number of hours actually required for the respective plan checks. Review of Community Development Department fees for application processing indicate that fees are insufficient to cover costs of services provided and, consequently, manpower logs for newly-received applications are in use to determine appropriate fees and processing charges for future applications.

### Development Impact Fees

Title 21 of the Municipal Code -- Public Dedication Requirements and Improvement Fees to be Paid by Development Projects -- defines the impact fee structure. Development projects are evaluated for the improvement needs that are generated. An "improvement study" may be required to estimate improvement needs of a particular project and to provide a basis for fees to

be established. Water, traffic, and parks and recreation impacts fees have been determined based on engineering studies and cost estimates of required system improvements prorated for each development project on the basis of objective measures of future benefit and use accruing to each such project. Table D-9 shows the per unit development impact fee amounts as of March 25, 2020.

<b>Table D-9: Residential Development Impact Fees Parks, Water and Traffic</b>	
<b>Parks</b>	
Single-Family Dwelling Unit	\$21,910
Multi-Family Dwelling Unit	\$15,112
<b>Water</b>	
Dwelling Unit with 1" meter	\$21,437
<b>Traffic</b>	
Single/Multi-family dwelling unit	\$540.47

Source: City of Signal Hill, Development Impact Fees, March 25, 2020

## School Impact (Developer) Fees – Long Beach Unified School District

### New Residential and Senior Housing

New residential construction and additions of more than 500 square feet are subject to a developer fee charged by the Long Beach Unified School District. These fees help provide school facilities to accommodate new residential development. According to the law, the fee is determined by square footage of assessable space. Effective as of June 1, 2020, the residential fee is \$4.08 per square foot.

Residential Senior Housing (as designated by the project's CC&Rs) will be assessed at the Level I Commercial rate of \$0.66 per square foot.

### ADU School Fee

ADUs are separate residential units that can house a new family that generates new students. Fees are assessed against all new ADU square footage in the same manner as with other new residential construction. ADUs are not additions to existing residential structures. Therefore, the exemption for additions of 500 square feet or less is not applicable. A new ADU is charged fees even if it is only 300 square feet. However, if an addition is added to an existing ADU, the addition exemption would apply. The following examples illustrate the application of fees, exemptions, and credits for ADUs:

- Construction of a new ADU that is detached or added to the exterior of an existing residential structure. In this example, the ADU would be fully assessed fees because it is a new residential structure that did not exist before. The mere fact that the ADU may be attached to an existing residential structure is not relevant. Thus, a 450- square foot ADU attached to an existing residential structure would be levied fees on the new 450 square feet of residential space.
- Construction of an ADU that converts part of an existing residential structure and adds additional square footage beyond the existing residential structure. In this example, there would only be the levy of fees for the added square footage, because the fees for the converted square footage would be offset by the existing residential square footage. Thus, a 450-square foot ADU that converts 200 square feet of an existing residence would only be levied fees for the new 250 square feet of residential space.
- Conversion of existing residential space into an ADU. If the new ADU would be entirely enclosed within an existing residence, no fees would be levied, since there is no new square footage being created by the ADU. However, fees would apply to the conversion of a garage into an ADU since school fees are not levied against garages.

Note that the impact fee restrictions on ADUs imposed by Senate Bill 13 ("SB 13") are only applicable to impact fees levied by cities, counties, and special districts. School districts are independently authorized to levy school developer fees per Education Code § 17620. SB 13 does not modify, suspend, or mention Education Code § 17620. Accordingly, SB 13 does not restrict school districts' levies of school fees on ADUs. For the same reasons, AB 881 does not limit the levy of school developer fees on ADUs.

### Fees for Typical Single-Family and Multi-Family Developments

Table B-10 shows the total fees for a typical single-family housing development. On a per unit basis, the fees total \$57,472. The City fees (excluding school impact fees) represent 8.2% of the costs for a home with a market value of \$600,000. School fees comprise 1.4% of a home with a market value of \$600,000.

Table B-11 shows the total fees for a typical multiple-family housing development. On a per unit basis, the City fees total \$45,321 exclusive of school impact fees. These City fees (excluding school impact fees) represent 11.8% of the costs of the market value/cost. School fees comprise 1.2% of market value/cost.

## Affordable Housing Developments Exempt from Development Impact Fees

Affordable housing developments are exempt from the three impact fees for parks, water and traffic. Sections 21.44.040, 21.44.050 and 21.48.050 of the Zoning Ordinance state that these fees:

"... shall not apply to new construction of residences which are sold or leased at rates affordable to very low and low income persons. To qualify for this exemption, the applicant must submit an agreement in a form acceptable to the city attorney binding the development project to a guarantee that the assessable lot area shall remain affordable to low and very low income persons for a period of not less than twenty years, and making the city a party to the covenant such that the restriction is enforceable by the city."

Tables B-10 and B-11 list the three fees for single- and multi-family developments.

**Table D-10: Typical Fees for a 10-Unit Single-Family Development**

Development Impact Fees	Per Unit	Project Total
Parks	\$21,910	\$219,100
Water	\$21,437	\$214,370
Traffic	\$540.47	\$5,404.70
<b>Permit and Plan Check Fees</b>		
Permit <sup>1</sup>	\$2,040	\$20,400
Plan Check <sup>2</sup>	\$1,734	\$17,340
<b>State Energy Plan Check Fees</b>	<b>\$51</b>	<b>\$510</b>
School Impact Fee <sup>3</sup>	\$8,160	\$81,600
<b>Planning Fees</b>		
View Analysis <sup>4</sup>	\$1,200	\$12,000
Other Planning Applications <sup>4</sup>	\$400	\$4,000
<b>Total</b>	<b>\$57,472.47</b>	<b>\$574,724.70</b>
City Fees as % of Market Value <sup>5</sup>	8.2%	
School Fees as % of Market Value <sup>5</sup>	1.4%	

<sup>1</sup>0.68 X building valuation of \$300,000; plan check also include seismic fee

<sup>2</sup>85% of permit fee

<sup>3</sup>Based on 2,000 square foot home

<sup>4</sup>Calculated on a per project basis

<sup>5</sup>Percentages are computed on a \$600,000 market value which is more than the building valuation of a new home

**Table D-11: Typical Fees for a 10-Unit Multi-Family Development**

Development Impact Fees	Per Unit	Project Total
Parks	\$15,112	\$151,120
Water	\$21,437	\$214,370

**Table D-11: Typical Fees for a 10-Unit Multi-Family Development**

<b>Development Impact Fees</b>	<b>Per Unit</b>	<b>Project Total</b>
Traffic	\$540.47	\$5,404.70
<b>Permit and Plan Check Fees</b>		
Permit <sup>1</sup>	\$1,360	\$13,600
Plan Check <sup>2</sup>	\$1,156	\$11,560
<b>State Energy Plan Check Fees</b>	\$36	\$360
<b>School Impact Fee<sup>3</sup></b>	\$4,080	\$40,800
<b>Planning Fees</b>		
View Analysis <sup>3</sup>	\$1,200	\$12,000
Other Planning Applications <sup>3</sup>	\$400	\$4,000
<b>Total</b>	\$45,321.47	\$453,214.70
<b>City Fees as % of Market Value<sup>4</sup></b>	11.8%	
<b>School Fees as % of Market Value<sup>4</sup></b>	1.2%	

<sup>1</sup>0.68 X building valuation of \$200,000; plan check also include seismic fee

<sup>2</sup>85% of permit fee

<sup>3</sup>Based on 1,000 square foot apartment

<sup>3</sup>Calculated on a per project basis and then divided by 10 units

<sup>4</sup>Percentages are computed on a market value/cost of \$350,000

## ADU Fees

ADUs up to 750 square feet are exempt from impact fees (Government Code Section 65852.2, Subdivision (f)(3)); ADUs that are 750 square feet or larger may be charged impact fees but only such fees that are proportional in size (by square foot) to those for the primary dwelling unit (Gov. Code, § 65852.2, subd. (f)(3)).

## Exactions

By definition, an exaction is a large capital improvement included in a project's approval for development (e.g., land dedication for parks and schools, etc.). Signal Hill does not require large-scale capital improvements to be constructed by project applicants. Instead, the City's development impact fees are intended to finance construction of such facilities. Since the City does not impose exactions, they are not a constraint to local development. As explained earlier, residential projects must dedicate land for street and alley widening when necessary.

The City believes that the fees for planning services, user charges, and plan check are both necessary and appropriate for residential development. The City has established each fee after careful study and consideration.

The development impact fees also have been established after a complete study and review of needs, costs and the pro-rata shares based on the nature and scope of development.

As affordable housing is exempt from the impact fees, the City finds that fees and exactions do not constrain the maintenance, improvement, or development of housing for all income levels.

## PROCESSING AND PERMIT PROCEDURES

HCD guidance indicates that the element should identify and analyze the types of permits and processing time required of housing developments and other applicable regulations.

## Site Plan and Design Review

New dwellings, additions of more than 500 square feet, and second story additions to existing dwellings are subject to a site plan and design review process. A complete submittal will generally include the following: architectural rendering, site plan, architectural elevations, floor plan, preliminary grading plan, preliminary landscape plan, and materials color board. View sensitive projects will include view analysis exhibits.

In approving or conditionally approving a site plan and design review application, the Community Development Director, the Planning Commission or City Council, as the case may be, shall find that:

- The proposed project is in conformance with the general plan, zoning ordinance, and other ordinances and regulations of the City;
- The proposed project is in conformance with any redevelopment plan and regulations of the redevelopment agency and any executed owner's participation agreement or disposition and development agreement;
- The proposed project avoids traffic congestion to ensure the public health, safety, and general welfare, and to prevent adverse effect on surrounding properties.
- The topography is suitable for the proposed site plan and the site plan, as proposed, is suitable for the use intended;
- The proposed development provides for appropriate exterior building design and appearance consistent and complementary to present and proposed buildings and structures in the vicinity of the subject project while still providing for a variety of designs, forms and treatments.

Development on the Orange Bluff Site in Appendix C is designated to accommodate all of the lower- and part of the moderate-income RHNA and will not be subject to the Site Plan or Design review processes. The City and property owner have conducted all environmental analysis, including extensive technical studies, and will implement mitigation measures and complete require remediation of oil extraction activities on the site. This cost of this effort is being covered by the City and property owner and will not be passed on to the eventual developer. The same goes for the Walnut Bluff site that is designated to accommodate the moderate income RHNA. The City will conduct a search for affordable housing developers and will turn the sites over "shovel ready". Because the environmental analysis, site mitigation, and conceptual plans are completed, the sites will only require ministerial development approval.

## Review and Approval Timelines

The Community Development Department continues in its efforts to reduce paperwork and processing time for all development project applications. Inter-departmental coordination of development

applications is facilitated by the relatively small size of the staffs and familiarity of all staff members with each project proceeding through the application process.

Average processing time for residential projects varies based on project complexity but general estimates are provided in Tables D-12 and D-13. Signal Hill's development review process is designed to accommodate housing development applications of various levels of complexity and requiring different entitlements. Processing times vary with the complexity of the project. Tables D-12 and D-13 outline the typical timelines for various residential projects. Table D-12 focuses more specifically on the individual entitlement approvals that may be required, providing estimated processing timelines for each as well as identifying the approving body. Table D-13 generally identifies the typical approvals required for single-family and multi-family projects, along with the estimated processing times of the planning and building departments.

A summary of the review and approval timelines is provided below:

- Residential projects that require building permits only are typically approved within two to four weeks of submittal of all required correct information. The approving body is the City staff.
- All new residential projects require a Site Plan and Review process. Staff has authority over Administrative Site Plan and Design review.
- Development projects that require Planning Commission approval take an average of six weeks to reach public hearing. This time frame is highly dependent on the applicant's accurate and timely response to City staff comments on the submittal of the Site Plan. Accordingly, the deadline for submitting completed view analysis materials, architectural plans, brochures, letters, and materials color display boards is approximately one month before the meeting date. This is the minimum time necessary to complete environmental documents, public notices and prepare reports, resolutions and conditions of approval for the Commission's consideration.

The Planning Commission meets monthly on the third Tuesday at 7:00 P.M. in the City Hall Council Chambers. Applicants attend all Commission meetings related to their project and are prepared to answer questions from the Planning Commissioners. Agenda packets are distributed to the Commissioners the Thursday before the Commission meeting.

**Table D-12: Timelines for Permit Procedures**

Type of Approval, Permit, or Review	Typical Processing Time (SF)	Typical Processing Time (MF)
<i>*These time periods begin when a complete application is submitted and are extended when additional information is requested by the City. The timeframes below are target issuance date—when the applicant can expect a decision on their application.</i>		
Ministerial Review	30-90 days	30-90 days
Condition Use Permit	6-9 months (CUP requires CC approval)	Not common for MF projects
Zoning Amendment (Zone Change)	6-9 months	6-9 months
General Plan Amendment	6-9 months	6-9 months
Specific Plan	6-9 months	6-9 months
Variance	Not common for SF	Not common for MF
Site Plan Review	6-9 months	6-9 months

**Table D-12: Timelines for Permit Procedures**

Type of Approval, Permit, or Review	Typical Processing Time (SF)	Typical Processing Time (MF)
Tract Maps	6-9 months	6-9 months
Parcel Map	6-9 months	6-9 months
Initial Environmental Study	3-5 months	3-5 months
Environmental Impact Report	Not common for SF	6-12 months

Source: City of Signal Hill, 2021

**Table D-12: Typical Processing Procedures by Project Type**

	Single Family Unit	Subdivision	Multi-family < 20 units	Multi-family > 20 units
Typical Approval Requirements	Site plan design review	Tentative Map	Site Plan design review	Site Plan design review
	IS/MND or ND	IS/MND or ND	Specific plan/ZOA/ GPA	Specific plan/ZOA/ GPA
	LID plan	LID/SWPP	Tentative Map	Tentative Map
	Landscape plan	Landscape Plan	IS/MND or ND	IS/MND or ND
		Final Map	LID/SWPP	LID/SWPP
			Landscape Plan	Landscape Plan
			Final Map	Final Map
Est. Total Processing Time	6-9 months	6-12months	6-12months	6-12months

Note: Processing times may vary by sq. ft., building type, design, complexity, and volume of workload; inspection times not included

Development on the Orange Bluff Site in Appendix C is designated to accommodate all of the lower- and part of the moderate-income RHNA and the Walnut Bluff site is designated to accommodate the moderate income RHNA. These sites will not be subject to the Site Plan or Design review processes as the City and property owner have conducted all environmental analysis, including extensive technical studies, and will implement mitigation measures and complete require remediation of oil extraction activities on the site. The cost of this effort is being covered by the City (with PLHA funding) and property owner and will not be passed on to the developer. The City will conduct a search for affordable housing developers and will turn the sites over “shovel ready”. Because the environmental analysis, site mitigation, and conceptual plans are completed, the sites will only require ministerial development approval which will reduce the development review time significantly.

## Building, Grading and Street Improvement Plan Check

Following approval of the project at the Planning Commission public hearing, plans will be accepted for building, grading and street improvement plan check. The Building Division serves as the overall project coordinator for building plans and planning approvals, and issues building and grading permits. The Public Works Department Engineering Division plan checks grading, street and alley, and sewer and water improvement plans.

At time of submittal for building plan check, applicants pay a plan check fee equal to 85% of the building permit fee. The City uses Building Valuation Data as published in Building Standards Magazine to determine building valuation. Permit and plan check fees are adopted from time to time by City Council

resolution. The Public Works Engineering Division collects a separate plan check deposit for grading, erosion control, street, water and sewer improvement plans. Plans are checked by licensed structural or civil engineers under contract to perform plan checks for the City. The costs for these services are passed through to the applicant.

## Overlay Zones

The Zoning Ordinance provides for two overlay zones – the Orange Avenue and Landscape Overlay Districts. The purpose of the Orange Overlay District is to “improve the appearance of properties with frontage” on Orange Avenue between Willow and Hill Streets. Development standards for setbacks, fencing, screening, landscaping, painting and the like are set forth in this overlay district.

The Landscape Overlay District “promotes consistent and distinctive landscaping of front setbacks” along Cherry Avenue, Spring Street, and/or Willow Street.

These overlay districts do not impact residential neighborhoods nor do they impact new housing construction.

## State Laws Controlling the City's Processing Timelines

### ADU Processing Timeline

The City will implement State law which requires a permitting agency to act on an application to create a new accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot (Government Code Section 65852.2 (a)(3) and (b)). If the permit application to create an accessory dwelling unit or a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the City may delay acting on the permit application for the accessory dwelling unit or the junior accessory dwelling unit until the City acts on the permit application to create the new single-family dwelling. However, the City – pursuant to State law - will consider the application to create the accessory dwelling unit or junior accessory dwelling unit without discretionary review or hearing.

### SB 330 Streamlining

The City's timelines also will be consistent with those contained in SB 330 Housing Crisis Act of 2019. For example, SB 330 limits the number of public hearings on a housing development project to five. The State law also reduces the time that the City has to approve or disapprove an application under the permit streamlining act from 120 to 90 days for a housing project that requires CEQA review and from 90 to 60 days if a housing project is at least 49% affordable units.

### SB 35 Affordable Housing Streamlining

When jurisdictions have insufficient progress toward their Above Moderate income RHNA and/or have not submitted the latest Housing Element Annual Progress Report, these jurisdictions are subject to the streamlined ministerial approval process (SB 35 (Chapter 366, Statutes of 2017) streamlining) for proposed developments with at least 10% affordability.

Signal Hill is one of 298 jurisdictions in the State subject to the streamlining requirements.

## Processing of Orange Bluff, Walnut Bluff, Town Center Northwest, and Heritage Square Specific Plans

The Planning Commission and City Council will adopt Specific Plans for these areas that describe the location, goals and objectives, permitted uses, density, building height, parking and other development standards. The site plans for Orange Bluff and Walnut Bluff will be approved by the Community Development Director and will not require public hearings.

In summary, processing time does not pose a potential or actual governmental constraint to the development of new housing that will accommodate the City's RHNA for the 2021-2029 planning period.

## CONSTRAINTS ON HOUSING FOR DISABLED PERSONS

The Housing Element must identify constraints on housing for people with disabilities and efforts to remove any such constraints. More specifically, the analysis must:

- Identify whether the locality has an established reasonable accommodation procedure
- Review zoning laws, policies, and practices for compliance with fair housing laws
- Evaluate permits and processing as they affect applications from disabled persons
- Review Building Code amendments and practices that might diminish the ability to accommodate persons with disabilities

### Reasonable Accommodation Procedure

The City adopted a reasonable accommodation procedure in October 2016. The procedure is based on the guidance by the Federal Departments of Justice and Housing and Urban Development, and the California Attorney General's Office. The procedure is modeled after the one developed by the Mental Health Advocacy Services, Inc.

In addition, in December 2020 the City completed the preparation of a brochure describing the reasonable accommodation procedure and the application which may be submitted to the Community Development Department.

### Zoning and Fair Housing

#### Definition of Family

In August 2014 the Zoning Ordinance definition of family was amended to become consistent with fair housing laws. The definition is: "Family means one or more persons living together as a single housekeeping unit in a dwelling unit."

## Zones Allowing Residential Care Facilities

Under California state law, licensed facilities serving six persons or fewer receive special land use protection. California requires that many types of licensed facilities serving six persons or fewer be treated for zoning purposes like single-family homes.

The Zoning Ordinance was amended to include the following definition:

"Licensed Group Home" means a group home housing six or fewer persons that is licensed by the State of California under the provisions of the Health and Safety Code.

In addition, the Zoning Ordinance was amended to permit licensed group homes in all residential zones allowing single family homes.

Excluding unlicensed group homes (such as those for the disabled) for six or fewer persons in the City's development standards may have the effect, even if unintentionally, of treating disabled persons differently than other groups of unrelated individuals living together. Some "group homes" do not require a license. Examples are independent living homes for people with disabilities where care is provided by a third party, not the housing provider. Homes where unrelated adults reside should not be regulated in any way by the City. The City will review Zoning Ordinance standards and procedures associated with the approval of residential care facilities and revise as appropriate to provide consistent application of standards and ensure that these uses are treated objectively and do not discriminate against persons with disabilities (Program 3.3).

## Boarding House and Rooming House Definitions

State law requires that residential care facilities not be defined within the meaning of boarding house, rooming house, institution or home for the care of minors, the aged, or the mentally infirm, foster care home, guest home, rest home, sanitarium, mental hygiene home, or other similar term which implies that a residential facility is a business run for profit. The Zoning Ordinance has definitions for three of these terms:

"Boardinghouse" or "rooming house" means a building containing a single dwelling unit and provisions for not more than five guest rooms and where lodging is provided with or without meals for compensation, but not to include rest homes."

"Lodging house" means the same as "boardinghouse." "Rooming house" means the same as "boardinghouse."

The Zoning Ordinance does not include residential care facilities within meaning of the three above terms.

## Residential Care Facilities for Seven or More Persons

In the single-family zones, the City requires a conditional use permit for residential care facilities involving seven or more patients. State law allows cities to require a conditional use permit for residential care facilities for seven or more persons.

However, the City would adhere to the DOJ and HUD interpretation of the Fair Housing Act. In this regard, the two Departments state that

“...because persons with disabilities are entitled to request reasonable accommodations in rules and policies, the group home for seven persons with disabilities would have to be given the opportunity to seek an exception or waiver.”

The CUP process is not a constraint to development of group homes because it is an approval process that allows the City to place certain controls on the permit that will prevent a transition to an unpermitted commercial use in a residential zone. The conditional use permit process is intended to serve the important functions of establishing development and operations standards, allowing assessment of each individual site, and fostering public input. One of the primary considerations for the CUP process for group homes for persons with disabilities is safety for vulnerable populations. Several safety-related property improvements are required when a group home is proposed to accommodate more than seven residents. The conditional use permit process allows for the City to ensure group homes are the appropriate size for the proposed number of residents, to verify that group homes have addressed safety related issues and that management of the facility is adequate to ensure that their clients live in humane and safe conditions. Conditional use permits can also address circumstances that are often related to group home operations that may impact the surrounding community, such as parking and traffic control as well as litter and smoking within residential neighborhoods. The conditional use permit process provides an opportunity for flexibility in standards such as parking, as facilities serving disabled persons will most likely have lower parking demands and traffic impacts. These requirements apply to all uses with a conditional use permit, not just group homes or residential care facilities.

Nevertheless, local zoning and land use laws that treat groups of unrelated persons with disabilities less favorably than similar groups of unrelated persons without disabilities is a fair housing issue. A local government may generally restrict the ability of groups of unrelated persons to live together if the restrictions are imposed on all such groups. Requiring a conditional use permit for residential care facilities for seven or more persons has the effect, even if unintentionally, of treating disabled persons differently than other groups of unrelated individuals living together. The City will review Zoning Ordinance standards and procedures associated with the approval of residential care facilities and revise as appropriate to provide consistent application of standards and ensure that these uses are treated objectively and do not discriminate against persons with disabilities (Program 3.3).

### Siting or Separation Requirements for Licensed Residential Care Facilities

The City's Zoning Ordinance does not establish siting or separation requirements for the facilities.

Over concentration of certain care homes in a neighborhood is regulated by the State for licensed facilities. Except for foster homes and elderly care, licenses issued by the California Department of Social Services (CDSS) must be a minimum of 300 feet away from any other licensed home (as measured from the outside walls of the house – Health and Safety Code Section 1520.5) If a home is less than the 300 feet, an exemption must be granted by the city, otherwise the license is denied. This 300-foot separation restriction does not apply to licenses issued by the State Department of Alcohol and Drugs for rehabilitation homes.

CDSS must submit any application for a facility covered by the law to the city where the facility will be located. The city may request that the license be denied based on the over concentration or an existing

facility (or within 1,000 feet of a congregate living health facility) unless the city approves the application. Even if there is adequate separation between the facilities, a city or county may ask that the license be denied based on over concentration.

These separation requirements apply only to facilities with the same type of license. For instance, a community care facility would not violate the separation requirements even if located next to a drug and alcohol treatment facility.

The City complies with fair housing laws as they relate to spacing and separation requirements. The City has not adopted a standard different from or more stringent than the one the State applies. Moreover, the DOJ and HUD acknowledge that neighborhoods as well as the disabled may suffer if licensed residential care facilities are over concentrated. The DOJ and HUD offer the following guidance:

...if a neighborhood came to be composed largely of group homes, that could adversely affect individuals with disabilities and would be inconsistent with the objective of integrating persons with disabilities into the community. Especially in the licensing and regulatory process, it is appropriate to be concerned about the setting for a group home. A consideration of over-concentration could be considered in this context. This objective does not, however, justify requiring separations which have the effect of foreclosing group homes from locating in entire neighborhoods.

Joint Statement of the Department of Justice and the Department of Housing and Urban Development, Group Homes, Local Land Use, and the Fair Housing Act, August 18, 1999, page 4

### Parking Requirements for Persons with Disabilities

The City's parking standards are established for different uses, not in terms of the occupants of the use. For instance, the City does not have parking standards for single- or multi-family housing occupied by disabled or elderly persons.

The City, however, recognizes that disabled persons who occupy licensed residential care facilities generate a parking need different from non-disabled persons. For instance, developmentally disabled persons may not have licenses to drive a car. The "reasonable accommodation procedure" will include an opportunity for disabled persons (or their representatives) to request a reduction and/or waiver of parking requirements.

### Permits and Processing

HCD guidance indicates the element should:

- Evaluate include the process for requesting retrofit for accessibility
- Ensure compliance with all State laws regulating permit requirement of licensed residential care facilities with fewer than six persons in single-family zones
- Identify any conditions or use restrictions for licensed residential care facilities with greater than 6 persons or group homes that will be providing services on-site

Non-structural retrofits within buildings like adding grab bars, replacing doorknobs with single- lever doorknobs, and exchanging toilets do not require building permits, or City approvals. Structural retrofits like widening doorways or constructing ramps requires a building permit. These requirements are the

same for single- and multi-family housing. Tenants residing in apartments must first obtain permission from the owner and/or property manager to make the retrofits.

Apart from requiring a conditional use permit, the City has no other conditions or use restrictions on group homes serving seven or more persons.

## Building Codes

HCD guidance indicates the element should:

- Evaluate the Building Code to determine if any regulations might diminish the ability to accommodate persons with disabilities,
- Identify adopted universal design elements in the building code
- Provide reasonable accommodation for persons with disabilities in the enforcement of building codes and the issuance of building permits.

The City has adopted the 2019 California Building Code and implements all provisions accommodating disabled persons.

On October 31, 2005, HCD certified and made available the “Model Universal Design Local Ordinance.” HCD indicated that the Ordinance might be adopted voluntarily in substantially the same form by any city or county pursuant to Section 17959. The City has not adopted a universal design ordinance. The City understands that universal design aims to serve all people of all ages, sizes, and abilities and is applied to all buildings. The City may explore the application of universal design features in both existing and new housing.

The City has adopted a Reasonable Accommodation Procedure. That procedure includes request for reasonable accommodations from the requirements of the Building Code.

## ANALYSIS OF ADOPTED ORDINANCES THAT DIRECTLY IMPACT THE COST AND SUPPLY OF HOUSING

The City has imposed no moratoria or prohibitions against multifamily housing developments. During the 2013-2-21 planning period, 72 affordable housing units were constructed.

The City has no growth control policies or ordinances. Signal Hill is completely surrounded by the City of Long Beach and Long Beach Municipal Airport.

In addition, the City has not adopted ordinances pertaining to rent control, short term rentals or crime-free rental housing.

The City will be adopting ordinances that contribute to land cost reductions (i.e., density bonus ordinance) and increasing the supply of housing (i.e., accessory dwelling unit ordinance).

## DESCRIPTION OF EFFORTS TO REMOVE GOVERNMENTAL CONSTRAINTS THAT HINDER THE CITY FROM MEETING ITS SHARE OF THE REGIONAL HOUSING NEED

The following efforts have been undertaken during the development of the 2021-2029 Housing Element:

- Reached out and worked on a cooperative basis with the City's major property owner to identify sites that could be-re-zoned from non-residential to residential uses
- Prepared Specific Plans for the sites identified as accommodating the above moderate, moderate and lower income housing needs
- Prepared illustrative site plans for the sites accommodating the RHNA.
- Identified environmental constraints and mitigation/remedial measures
- Prepared an Environmental Impact Report on the 2021-2029 Housing Element and the above moderate income, moderate income, and lower income housing sites.

## ENERGY CONSERVATION OPPORTUNITIES

Energy-related housing costs can directly impact the affordability of housing. While State building code standards contain mandatory energy efficiency requirements for new development, the City and utility providers are also important resources to encourage and facilitate energy conservation and to help residents minimize energy-related expenses. The City's Sustainable City Committee (SCC) is charged with developing and recommending a sustainability framework to the Council that promotes environmentally sound and financially practical objectives and received two Beacon Awards for Sustainability in 2018. A Gold Level Beacon Award for Sustainability Best Practices and a Silver Level Award for 6% Energy Savings. In 2020, the SCC received a Platinum Level Beacon Award and has oversight of the 2020 application for Sustainability Best Practices. In 2021, the SCC recommended, and the City Council approved, a resolution to join the Energy Upgrade California programs to assist with continued outreach and education regarding methods and programs to conserve energy at home and for businesses. The City also received the Gateway Cities Energy Action Award – Silver Level in 2022. This recognition, awarded by the Gateway Cities Energy Leaders Partnership with SoCal Gas, acknowledges progress made in completing energy efficiency projects and partnerships with other agencies and organizations to save energy.

The City has earned recognition for sustainability best practices for the following activities:

- In 2018, the city encouraged the development of the green residential Aragon Townhomes, previously a brownfield, and approved the project because of its various green designs. The townhomes were built beyond Cal Green standards, featuring solar systems and energy efficient designs for all 81- units of 2 to 3- bedroom dwellings. While a residential project was not initially under the Specific Plan of Development, the city wanted to encourage and increase green building in the community. They were willing to modify density and building height requirements in the Specific Plan of Development to approve the project and have the green designs considered as amenities.

- The Pacific Walk Signal Hill Collection Phase 1 and 2 project is the city's first LEED certified multi-family housing development. The 55-unit development is all-electric, featuring solar panels, a pedestrian link, water efficient landscaping, and is pre-wired for electric vehicle chargers.
- In December of 2017, the city's selected developer, Meta Housing, completed development of 72 new affordable housing units. The project includes a community garden, is located near a transportation line, and is located within ¼ mile of schools, parks, cultural, civic, and retail opportunities. The project is striving to attain LEED Gold certification for the 3-story buildings and LEED Silver for the 4-story buildings.
- The city approved plans for a 25-unit detached single-family dwelling project. This development will have a trail system connection to the Town Center West retail center. The project has a green streets design with modular wetland filtration systems to treat stormwater and permeable pavers to provide additional source control for stormwater runoff and pollutant loads. Project construction is underway and has an estimated completion date of mid-2018.

The City also has a Municipal Green Building Policy to provide guidance in the development of sustainable green building practices. To encourage and assist with sustainable development practices, the city has a residential green building primer information PDF available on the city website at <https://www.cityofsignalhill.org/DocumentCenter/View/338/Green-Building-Primer>. Elements of the primer include definitions; benefits; examples; objectives and methods for construction and design materials; construction recycling practices; landscaping; and appliances and furnishings. The city has adopted the Municipal Green Building Policy to encourage energy and resource efficiency developments, minimize environmental impacts, and meet minimum LEED Silver standard for construction of all new municipal buildings. The city also participates in regional efforts to reduce GHG emissions by participation in committees, events and meetings of the Southern California Area of Governments (SCAG), and particularly the Gateway Cities Council of Governments (COG).

Policies addressing climate change and energy conservation are integrated into the Signal General Plan. Policy 3.17 in the Land Use Element promotes "smart growth" principles that encourage development that is economically viable, creates a sense of community, and preserves natural resources. Smart growth includes narrower streets, mixed uses, smaller setbacks, open spaces, habitat preserves and parks, infill development and compact commercial centers, and the reuse of brownfields. The city's Circulation Element Policy 3.a promotes healthy, energy efficient and sustainable living by promoting the expansion of city trails and walkway systems. This policy increases available open space to support different types of uses and the different recreational needs of the community. Circulation Element Policy 1.b requires new development to include circulation and utility system improvements, including dedication of land for widening of roadways for pedestrian and bicycle facilities, where appropriate. This policy increases opportunities for walking and bicycling by requiring direct pedestrian and bike paths through new developments. The City has adopted the 2019 California Green Building Standards Code (CGBSC) is also referred to as CALGreen. This code features regulations for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, environmental quality, and more.

Southern California Edison offers various energy conservation programs. The Energy Savings Assistance Program helps income-qualified customers with free appliances and installation of energy-efficient refrigerators, air conditioners and more, as well as home efficiency solutions like weatherization. The Home Energy Efficiency Rebate Program offers financial incentives for installing approved energy upgrades. The Multifamily Energy Efficiency Rebate Program offers property owners and managers incentives on a broad list of energy efficiency improvements in lighting, HVAC, insulation, and window categories. These improvements are to be used to retrofit existing multifamily properties of two or more units.

**APPENDIX E**  
**ANALYSIS OF NON-GOVERNMENTAL CONSTRAINTS**

# APPENDIX E

## ANALYSIS OF NON-GOVERNMENTAL CONSTRAINTS

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### INTRODUCTION

Government Code Section 65583(a)(6) requires -

An analysis of potential and actual nongovernmental constraints upon the maintenance, improvement, or development of housing for all income levels...

The analysis must examine the following:

- Availability of financing
- Price of Land
- Cost of construction
- Requests to develop housing at densities below those stated in the 2014-2021 sites inventory and analysis (Government Code 65583.2)(c)
- Length of time between receiving approval for a housing development and submittal of an application for building permits
- Efforts to remove nongovernmental constraints creating a gap between the planning for and construction of housing

In addition, information is presented on housing prices and rents.

### AVAILABILITY OF FINANCING

The analysis of the availability of financing is based on the Home Mortgage Disclosure Act (HMDA) data on FHA and conventional loan applications made by borrowers to buy a home in Signal Hill. The data provide the basis to calculate loan denial rates by loan type, borrower income, race/ethnicity, and census tract. The HMDA data analysis covers calendar years 2018 and 2019. The 2020 data will not available until September 2021.

#### Analysis of Home Purchase Loan Applications

During the two-year period 323 loan applications were made of which 8% were denied and 92% were approved. The loan denial rates for conventional loan applications were considerably lower than for FHA

loan applications: 6.9% to 17.6%. The higher FHA denial rates are probably caused by the borrower's FICO scores, poor credit history, and high debt-to-income ratios. Refer to Table E-1.

Overall, the vast majority – almost nine of every 10 loan applications - are approved.

FHA loan applications, however, represent a small share of the market as they comprise 10% of all loan applications.

Table E-2 reports on loan denial rates by loan type and income. Generally speaking, lower income borrowers have the highest loan denial rates. Borrowers in the middle and higher income groups have the lowest denial rates.

Table E-3 shows the loan denial rates by race and ethnicity. Black borrowers experience the highest loan denial rates at almost 15%. Black borrowers submitted 27 applications, indicating that a small increase in approvals would significantly alter the denial percentage. Overall, Black applicants represented 8.4% of all borrowers.

The other borrowers also had a higher than average loan denial rate of 12%.

Table E-3 also shows that Hispanic borrowers comprise 14.2% of all borrowers. The White, non-Hispanic borrowers comprise 31.6% of all borrowers.

**Table E-1: FHA/VA and Conventional Loan Applications and Denial Rates: 2018 and 2019**

Type of Application	2018 Number/Percent	2019 Number/Percent	Total Number/Percent
<b>FHA/VA/FSA</b>			
Total Applications	18	16	34
Number Denied	3	3	6
Percent Denied	16.7%	18.8%	17.6%
<b>Conventional Loans</b>			
Total Applications	151	138	289
Number Denied	12	8	20
Percent Denied	7.9%	5.8%	6.9%
<b>All Loans</b>			
Total Applications	169	154	323
Number Denied	15	11	26
Percent Denied	8.9%	7.1%	8.0%

Source: Federal Financial Institutions Examination Council (FFIEC), Home Mortgage Disclosure Act (HMDA)  
Website HMDA Data Browser

**Table E-2: FHA/VA and Conventional Loan Denial Rates by Household Income: 2018 and 2019**

Loan Type and Income	Total Applications	Total Denied	Percent Denied
<b>FHA/VA/FSA Loans</b>			
<\$60,000	0	0	0.0%

**Table E-2: FHA/VA and Conventional Loan Denial Rates by Household Income: 2018 and 2019**

<b>Loan Type and Income</b>	<b>Total Applications</b>	<b>Total Denied</b>	<b>Percent Denied</b>
\$60,000-\$79,999	5	1	20.0%
\$80,000-\$99,999	5	2	40.0%
\$100,000-\$119,999	6	2	33.3%
\$120,000-\$139,999	8	1	12.5%
\$140,000-\$159,999	1	0	0.0%
\$160,000-\$179,999	4	0	0.0%
\$180,000-\$199,999	4	0	0.0%
\$200,000+	1	0	0.0%
Income Not Available	0	0	0.0%
<b>Total</b>	<b>34</b>	<b>6</b>	<b>17.6%</b>
<b>Conventional Loans</b>			
<\$60,000	7	1	14.3%
\$60,000-\$79,999	23	1	4.3%
\$80,000-\$99,999	60	6	10.0%
\$100,000-\$119,999	50	3	6.0%
\$120,000-\$139,999	34	2	5.9%
\$140,000-\$159,999	23	1	4.3%
\$160,000-\$179,999	23	2	8.7%
\$180,000-\$199,999	21	2	9.5%
\$200,000+	46	2	4.3%
Income Not Available	2	0	0.0%
<b>Total</b>	<b>289</b>	<b>20</b>	<b>6.9%</b>
<b>All Loans</b>			
<\$60,000	7	1	14.3%
\$60,000-\$79,999	28	2	7.1%
\$80,000-\$99,999	65	8	12.3%
\$100,000-\$119,999	56	5	8.9%
\$120,000-\$139,999	42	3	7.1%
\$140,000-\$159,999	24	1	4.2%
\$160,000-\$179,999	27	2	7.4%
\$180,000-\$199,999	25	2	8.0%
\$200,000+	47	2	4.3%
Income Not Available	2	0	0.0%
<b>Total</b>	<b>323</b>	<b>26</b>	<b>8.0%</b>

Source: Federal Financial Institutions Examination Council (FFIEC), Home Mortgage Disclosure Act (HMDA) Website HMDA Data Brower

**Table E-3: FHA/VA and Conventional Loan Denial Rates By Race and Ethnicity: 2018 and 2019**

<b>Race/Ethnicity</b>	<b>Total Applications</b>	<b>Total Denied</b>	<b>Percent Denied</b>
<b>FHA/VA/FSA Loans</b>			
Hispanic	8	3	37.5%

<b>Table E-3: FHA/VA and Conventional Loan Denial Rates By Race and Ethnicity: 2018 and 2019</b>			
Race/Ethnicity	Total Applications	Total Denied	Percent Denied
White, Non- Hispanic	10	1	10.0%
Black	4	0	0.0%
Asian	1	0	0.0%
All Other <sup>1</sup>	11	2	18.2%
<b>Total</b>	<b>34</b>	<b>6</b>	<b>17.6%</b>
<b>Conventional Loans</b>			
Hispanic	38	0	0.0%
White, Non- Hispanic	92	3	3.3%
Black	23	4	17.4%
Asian	55	4	7.3%
All Other <sup>1</sup>	81	9	11.1%
<b>Total</b>	<b>289</b>	<b>20</b>	<b>6.9%</b>
<b>All Loans</b>			
Hispanic	46	3	6.5%
White, Non- Hispanic	102	4	3.9%
Black	27	4	14.8%
Asian	56	4	7.1%
All Other <sup>1</sup>	92	11	12.0%
<b>Total</b>	<b>323</b>	<b>26</b>	<b>8.0%</b>

<sup>1</sup> Includes all other races and applications where race and/or ethnicity were not available

Source: Federal Financial Institutions Examination Council (FFIEC), Home Mortgage Disclosure Act (HMDA) Website HMDA Data Browser

## Redlining/Financing Availability by Census Tract

Redlining describes a situation where mortgage services are denied or limited for two specific reasons:

- The racial and/or ethnic composition of an area's residents
- The age of an area's properties

Redlining is when lenders used discriminatory and unfair lending practices that result in reduced lending accessibility for borrowers in the areas that show high populations of racial minorities, regardless of the credit worthiness of each individual borrower. The word redlining comes from the practice of outlining in red those geographical areas that were perceived to pose a higher mortgage risk. Redlining can affect a particular street, block, census tract, or an entire city.

According to the U.S. Department of Housing and Urban Development (HUD), the analysis of loan denial rates by census tract will help to identify if there are underserved neighborhoods.

The overwhelming majority of loan applications were made to homes in census tract 5734.02 and 5734.03. Almost 92% of the loan applications to buy a home in these two census tracts were approved. In addition, none of the loan applicants to buy a home in census tract 5734.01 were denied.

Overall, the loan denial/loan approval rates are high and no individual census tract appears to be underserved.

**Table E-4: FHA/VA and Conventional Loan Denial Rates by Census Tract: 2018 and 2019**

Census Tract	FHA/VA Loans			Conventional Loans			All Loans		
	Total Apps.	Total Denied	Percent Denied	Total Apps.	Total Denied	Percent Denied	Total Apps.	Total Denied	Percent Denied
5734.01	3	0	0.0%	15	0	0.0%	18	0	0.0%
5734.02	15	4	26.7%	135	9	6.7%	150	13	8.7%
5734.03	16	2	12.5%	139	11	7.9%	155	13	8.4%
<b>Total</b>	<b>34</b>	<b>6</b>	<b>17.6%</b>	<b>289</b>	<b>20</b>	<b>6.9%</b>	<b>323</b>	<b>26</b>	<b>8.0%</b>

Source: Federal Financial Institutions Examination Council (FFIEC), Home Mortgage Disclosure Act (HMDA) Website HMDA Data Browser

## PRICE OF LAND

### Single Family Lots

Land costs have a demonstrable influence on the cost and availability of affordable housing. Land costs are influenced by many variables, including scarcity and developable density, location, site constraints, and the availability of public utilities. As land becomes less available, the price of land increases.

Information on sold or for sale vacant single family lots was unavailable. There are few vacant R-1 lots.

### Multifamily Land

There is a vacant site for sale with frontage onto Pacific Coast Highway. The site is .91 acres (39,586 SF) and has an asking price of \$2.9 million. A re-zone to high density at 45 dwelling units per acre yields the potential for 40 multi-family housing units. The land cost equals \$72,500 per multifamily housing unit.

In 2015, TCAC approved LIHTC for the Gundry Hill (now Zinnia Apartments) 72-unit affordable multifamily housing development. The land cost was \$89,139 per multifamily housing unit.

Multifamily land costs now range between \$70,000 and \$90,000 per housing unit.

## COST OF CONSTRUCTION

Construction costs for housing can vary significantly depending on the type of housing, such as single-family, townhomes, and apartments. However, even within a particular building type, construction costs vary by unit size and amenities.

For standard housing construction, costs may average \$130 to \$167 per square foot for single-family residences depending on the type of construction, and \$120 to \$179 per square foot for multifamily

residential structure, depending on construction type and excluding parking (International Code Council Building Valuation Data, February 2021).

It should be noted that, when using BVD data, these are average costs based on typical construction methods for each occupancy group and type of construction. The average costs include foundation work, structural and nonstructural building components, electrical, plumbing, mechanical and interior finish material. The data is a national average and does not take into account any regional cost differences. As such, the use of Regional Cost Modifiers is subject to the authority having jurisdiction over the issuing of building permits.

In 2015, TCAC approved LIHTC for the Gundry Hill (now Zinnia Apartments) multifamily development. The construction cost per square foot was \$159. Thus, a 750 SF apartment unit would cost an estimated \$119,250.

## COMPONENTS OF TOTAL DEVELOPMENT COSTS

According to the Terner Center:

Total development costs are made up of a lot of different line items, including land or property acquisition costs, construction costs, architectural/engineering costs, local development fees, as well as fees associated with the —soft|| costs of development (e.g., legal fees, appraisals, and insurance).

Source: Terner Center for Housing Innovation, *The Costs of Affordable Housing Production: Insights from California's 9% Low-Income Housing Tax Credit Program*, March 2020, page 8 (Author: Carolina Reid)

Research completed by the Terner Center found that between 2008 and 2018, the hard costs of building apartment housing in California increased by \$68 per square foot. The research shows that hard construction costs (material and labor) are the primary driver of rising development costs. The shortage in the construction labor market and higher prices for general contractors (as well as the subcontractors they hire) is affecting affordable housing development — just as this shortage impacts market-rate development.

Source: Terner Center for Housing Innovation, *The Hard Costs of Construction: Recent Trends in Labor and Material Costs for Apartment Buildings in California*, March 2020, 25 pages (Authors: Hayley Raetz, Teddy Forscher, Elizabeth Kneebone, and Carolina Reid)

## COST OF AFFORDABLE HOUSING

The development costs associated with affordable housing are high and often exceed those of market rate projects. In many cities the cost of single family homes are less than those of individual apartments in an affordable housing development. The cost of new affordable housing is neither low cost nor cheap.

The United States Government Accounting Office (GAO) determined that in California the 2015 average per apartment unit development cost financed by Low Income Housing Tax Credits (LIHTC) was \$335,727. The 2015 average cost was 10% higher than in 2011.

Source: United States Government Accountability Office, *Low-Income Housing Tax Credit: Improved Data and Oversight Would Strengthen Cost Assessment and Fraud Risk Management*, September 2018, page 116

Affordable housing developments provide housing primarily for lower income households – that is, households whose annual income is 80% or less the County median income.

However, because 1) the development costs of tax credit projects have increased since 2015 and 2) they provide housing for extremely low and very low income households, the affordable rents usually supports 10% or less of the total development costs. HCD has reported that the average percentage shares of funding sources for an affordable housing development are as follows:

- State housing tax credits 11%
- Federal housing tax credits 43%
- Private bank loans 9%
- Federal HOME funds 5%
- Federal Home Loan Bank Affordable 3%
- State housing funds e.g. Veterans 19%
- State Mental Health Services Act 6%

For the Zinnia Apartments, the total development cost per unit was \$414,307. Twenty-two of the 72 units had monthly rents of less than \$500.00

## HOUSING PRICES AND RENTS

The cost of housing in a community is directly correlated to the number of housing problems and affordability issues. High housing costs can price low-income families out of the market, cause extreme cost burdens, or force households into overcrowded or substandard conditions. In Signal Hill more than half of renters (56%) and over a quarter of owners (26%) pay when 30% or more of their income is expended on housing costs. These households are referred to as “overpaying” or “cost burdened. See Table A-5 and A-6 for more details on cost burdened households in Signal Hill.

### Housing Prices

The American Community Survey (ACS) collects data on the owner's estimate of a home's value if it were for sale. The median home value was \$505,900, according to the 2015-2019 ACS. This value is probably lower the 2021 median home value.

Based on the owner estimates, more than one-half (50.6%) of the homes had a value of more than \$500,000. An estimated 40.3% had values in the range of \$300,000 to \$499,000. The balance of homes had estimated value of \$300,000 or more.

**Table E-5: Value of Housing Units: 2015-2019**

Value	Number	Percent
Less than \$100,000	53	2.1%
\$100,000 to \$124,999	0	0.0%
\$125,000 to \$149,999	0	0.0%

**Table E-5: Value of Housing Units: 2015-2019**

<b>Value</b>	<b>Number</b>	<b>Percent</b>
\$150,000 to \$174,999	56	2.3%
\$175,000 to \$199,999	8	0.3%
\$200,000 to \$249,999	22	0.9%
\$250,000 to \$299,999	84	3.4%
\$300,000 to \$399,999	465	18.8%
\$400,000 to \$499,999	531	21.5%
\$500,000 to \$749,999	680	27.5%
\$750,000 to \$999,999	377	15.3%
\$1,000,000 to \$1,499,999	188	7.6%
\$1,500,000 to \$1,999,999	6	0.2%
\$2,000,000 or more	0	0.0%
<b>\$100,000 to \$124,999</b>	<b>2,470</b>	<b>99.9%</b>

Note: total does not sum to 100% due to rounding

Source: 2015-2019 American Community Survey 5-Year Estimates, Table B25075 Value Occupancy

The home value data demonstrate that a few existing homes could be afforded by lower income households. The lower valued homes are probably one and two-bedroom condominiums.

Information provided by CoreLogic shows that the median home price in October 2021 was \$454,500, a drop of 4.3% from the previous year. Given the tight housing market in late 2021, home prices have increased. In fact, realtor.com (accessed January 4, 2021) shows that the median sold home price in the City is \$560,000 and the median listing home price is \$650,000. In comparison, the median home price in all of Los Angeles County in October 2021 was \$790,000, a 10.5% increase from the previous year.

## Housing Rents

The American Community Survey collects data on the gross rents of renter-occupied housing units. Gross rents include the contract rent plus utilities.

In Signal Hill, renter households occupy 47.7% of all housing units. Two-bedroom units comprise about four of every 10 rental units. The median gross rent for a 2-bedroom unit was \$1,521, according to the 2015-2019 ACS.

Rental units with three or more bedrooms comprise less than 18% of the rental housing stock. The median gross rent for a 3-bedroom unit was \$2,100.

Just more than 40% of the renter occupied housing units have monthly rents in the range of \$1,000 to \$1,499.

Almost one half (46.2%) of the rental units rent for \$1,500 or more per month. Less than 13% of the rental housing stock has monthly rents of less than \$1,000.

To afford a \$900 monthly rent with 30% of income requires an annual household income of \$36,000.

**Table E-6: Bedrooms by Monthly Gross Rent: 2015-2019**

Monthly Gross Rent	No Bedroom	1 Bedroom	2 Bedrooms	3+ Bedrooms	Total	Percent
Less than \$300	0	0	0	0	0	0.0%
\$300-\$499	0	54	0	0	54	2.4%
\$500-\$749	0	9	0	0	9	0.4%
\$750-\$999	65	140	16	0	221	10.0%
\$1,000-\$1,499	29	401	428	46	904	40.9%
\$1,500 or more	31	170	474	347	1,022	46.2%
Total	125	774	918	393	2,210	99.9%
Percent	5.7%	35.0%	41.5%	17.8%	100.0%	

Note: total does not sum to 100% due to rounding

Note: 39 renter households have no cash rent. Housing units that are renter occupied without payment of rent are shown separately as No rent paid. The unit may be owned by friends or relatives who live elsewhere and who allow occupancy without charge. Rent-free houses or apartments may be provided to compensate caretakers and ministers, for example.

Source: 2015-2019 American Community Survey 5-Year Estimates, Table B25068: Bedrooms by Gross Rent

Census data show that the median rent in Signal Hill among all renter-occupied housing units in 2019 was \$1,449 per month. Median rent for a one-bedroom unit was \$1,223 per month, and \$1,521 for a two-bedroom apartment. Data from real estate website rentcafe.com shows a much higher rental cost. As of October 2021, the average rent for a rental unit in the City was \$2,240.

## REQUESTS TO DEVELOP HOUSING AT DENSITIES BELOW THOSE STATED IN THE SITES INVENTORY AND ANALYSIS (GOVERNMENT CODE 65583.2(C))

The City has received no request to reduce the density of a site included in the land inventory of the 2014-2021 Housing Element. Development approval of projects with densities lower than what is listed in the Appendix C Sites Inventory and Analysis is unknown at this time.

## LENGTH OF TIME BETWEEN RECEIVING APPROVAL FOR A HOUSING DEVELOPMENT AND SUBMITTAL OF AN APPLICATION FOR BUILDING PERMITS

The cost of development can be affected by delays in the land development process. Market factors outside of the municipal approval process can drive up the costs and risks of private development.

On average, the length of time from project entitlement to issuance of building permits is two months. The length of time does depend on adequate performance by the project applicant.

The City finds that the length of time does not constrain housing development.

## EFFORTS TO REMOVE NONGOVERNMENTAL CONSTRAINTS CREATING A GAP BETWEEN THE PLANNING FOR AND CONSTRUCTION OF HOUSING

The following efforts have been undertaken by the Community Development Department:

- Implemented SB 35 streamlining procedures.
- Orange Bluff/Walnut Bluff Specific Plans – Community Development Director will administratively approve the site plans.
- Prompt completion of Local Review Agency (LRA) Project Evaluation Form for TCAC projects. The Community Development Department completes this form. Per the criteria set forth by the Tax Credit Allocation Committee, the Department performs an evaluation of the proposed project with regard to proximity to site amenities such as proximity to public transit, public parks, and public hospitals.
- Outreach to Signal Hill Petroleum, the City's largest landowner.
- Outreach to affordable housing developers.
- Collection of information on recently approved affordable housing developments in close proximity to Signal Hill.

**APPENDIX F  
HOUSING RESOURCES**

# APPENDIX F

## HOUSING RESOURCES

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Appendix F describes housing financial and administrative resources. Some, but not all, of the resources provide assistance that could contribute to addressing the City's housing needs. The availability of land resources to accommodate the City's share of the regional housing need was described in Appendix C - Sites Inventory and Analysis.

### FINANCIAL RESOURCES

#### **Permanent Local Housing Allocation (PLHA) Program**

SB 2 created a dedicated revenue source for affordable housing and directed the HCD to make available 70% of the moneys in the Building Homes and Jobs Trust Fund, collected on and after January 1, 2019, to local governments. Ninety percent of the moneys available will be allocated based on the formula used under Federal law to allocate CDBG funds to CDBG entitlement jurisdictions within California. Ten percent of the funds will be distributed to non-entitlement jurisdictions through a competitive grant program.

The PLHA funds are received directly to the County of Los Angeles County Development Authority. Signal Hill is eligible to receive approximately \$60,000 per year or almost \$500,000 during the 8-year planning period. Year 2 funds are approximately \$100,000 and will be used for remediation of constraints on housing sites and implementation of the Housing Element Update,

Home modifications of owner-occupied housing are an eligible PLHA activity.

#### **Home Investment Partnership Program (HOME)**

Signal Hill is not eligible to receive HOME funds directly from HUD. Annually, HUD allocates HOME funds to the County of Los Angeles. Attachment A describes the County's HOME program.

The LACDA's Home Ownership Program (HOP) assists households in Los Angeles County by making home ownership possible by facilitating affordable home purchases for low-income households, providing deferred payment loans for down payment assistance, individual credit counseling, and homebuyer education.

Families who want to purchase a home located in Signal Hill are eligible to apply for the assistance.

## Section 8 Rental Assistance

The County of Los Angeles Housing Authority administers this program. Rental assistance covers the difference between the market rent and the rent that income-eligible renters can afford based on 30% of their monthly income. The program assists 53 very low and low income households living in Signal Hill. The City reports assistance data annually during the General Plan Annual Progress Report.

## Low Income Housing Tax Credits

This program provides equity for the development of affordable housing. The City does not have direct access to this funding, which is awarded by the California Tax Credit Allocation

Committee (TCAC) to experienced non-profit and for-profit developers on a competitive basis. In 2015, TCAC awarded low income housing tax credits to the Zinnia Apartments.

## Affordable Housing and Sustainable Communities Program (AHSC)

The AHSC Program reduces greenhouse gas (GHG) emissions through projects implementing land-use, housing, transportation, and agricultural land preservation practices that support infill and compact development. Funding for the AHSC Program is provided from the Greenhouse Gas Reduction Fund (GGRF), an account established to receive Cap-and-Trade auction proceeds.

## CalHFA Multifamily Mixed Income Program

The CalHFA Mixed-Income Program (MIP) provides long-term subordinate financing for new construction of multifamily housing projects which restrict units at a mix between 30% and 120% of the Area Median Income. The program was created after Senate Bill 2 (SB2), the Building Homes and Jobs Act which was signed into law in 2017, established an annual appropriation to the Agency for the purpose of creating mixed income multifamily residential housing for lower to moderate income households. CalHFA receives 15% of the Building Homes and Jobs Act Fund for this purpose. For 2021, the Agency has also made available funds provided through 2019's Assembly Bill 101 (AB 101), the State Budget Housing Trailer Bill. AB 101 directs the funding to CalHFA to be used to finance low- and moderate-income housing.

CalHFA expects to have a total of \$60 million available for MIP subordinate financing in 2021.

## CalHFA Homebuyer Programs

The agency offers a variety of loan programs to purchasers of a home: conventional loans, government insured loans (FHA, VA), down payment assistance programs, and Mortgage Credit Certificates (MCCs).

## CalHFA Multifamily Programs

CalHFA's Taxable, Tax-Exempt, or CalHFA funded Permanent Loan programs provide competitive long-term financing for affordable multifamily rental housing projects. Eligible projects include newly

constructed or acquisition/rehabilitation developments that provide affordable housing opportunities for individuals, families, seniors, veterans, and special needs tenants.

CalHFA's Conduit Issuer Program is designed to facilitate access to tax-exempt and taxable bonds by developers that seek financing for eligible projects that provide affordable multifamily rental housing for individuals, families, seniors, veterans or special needs tenants. The conduit bonds may be used to finance the acquisition, rehabilitation, and/or development of an existing project, or they can be used for the construction of a new project.

### **HCD No Place Like Home Program (NPLH) Program**

This program provides funding and tools that enables HCD to address affordability issues associated with creating housing units that are specifically set aside for persons with serious mental illness who are chronically homeless, homeless, or at-risk of becoming chronically homeless. Under the program, the Department may make loans to reduce the initial cost of

acquisition and/or construction or rehabilitation of housing, and may set funds aside to subsidize extremely low rent levels over time.

### **HCD Multifamily Housing Program**

Funds for the program were authorized by the Veterans and Affordable Housing Act of 2018. The program funds new construction, rehabilitation of housing, development or conversion of a nonresidential structure to a rental housing development. Eligible uses include land acquisition and construction. The maximum rent limit is 30% of 60% of Area Median Income (AMI), adjusted by unit size.

### **HCD Supportive Housing Multifamily Housing Program**

Funds available are for multifamily rental housing projects involving new construction, rehabilitation, acquisition and rehabilitation, or conversion of nonresidential structures for the purpose of development of rental housing containing permanent supportive housing units for the target population.

### **HCD Veterans Housing and Homelessness Prevention Program**

This program involves collaboration between HCD, California Department of Veteran Affairs, and California Housing Finance Agency to provide \$600 million in Proposition 41 general obligation bonds to fund affordable multifamily rental, supportive and transitional housing. The goal is to fund 4,800 new veteran housing units including 2,880 to 3,300 permanent supportive housing units for homeless veterans. Of the permanent supportive housing units, 1,200 to 1,400 will be for chronically homeless veterans. Priority is placed on housing to be developed in areas with especially high concentrations of California's most vulnerable veterans while preserving funding for other areas.

"Veteran" means any person who served in the active military, naval, or air service of the United States or as a member of the National Guard who was called to and released from active duty or active services for a period of not fewer than 90 consecutive days or was discharged from service due to a service-related disability. This includes veterans with other-than- honorable discharges.

At least 50% of the funds awarded shall serve veteran households with extremely low incomes. Of those units targeted to extremely low-income veteran housing, 60 percent shall be supportive housing units.

## Housing for Healthy California (HHC) Program

In September of 2017, as part of a landmark housing package, Governor Jerry Brown signed AB 74 into law. The HCD is authorized to develop the Housing for a Healthy California (HHC) Program. The HHC program creates supportive housing for individuals who are recipients of or eligible for health care provided through the California Department of Health Care Services, Medi-Cal program. The goal of the HHC program is to reduce the financial burden on local and state resources due to the overutilization of emergency departments, inpatient care, nursing home stays and use of corrections systems and law enforcement resources as the point of health care provision for people who are chronically homeless or homeless and a high-cost health user.

## AB 101

### New State Low Income Housing Tax Credits Program

Provides for the allocation of \$500 million in new state low-income housing tax credits for new construction projects that receive the federal 4 percent tax credit. For these new credits, the bill would increase the eligible basis for these projects from 13 percent to 30 percent. It would require at least \$300 million of this to be available to new construction projects receiving the federal 4 percent tax credit, and would allow up to \$200 million to be available to projects receiving assistance from the California Housing Finance Agency (CalHFA) Mixed Income Program.

### CalHome Program

AB 101 (2019) allows the CalHome program to include accessory dwelling units (ADUs) and junior accessory dwelling units (JADU), and to authorize the program to make grants for housing purposes in declared disaster areas.

## ADMINISTRATIVE RESOURCES

Administrative resources include organizations that are able to assist the City in implementing housing activities, including some of those described in Section II - Housing Program.

## California Department of Housing and Community Development (HCD)

This agency can provide technical assistance on a myriad of housing topics, including model housing programs and ordinances.

## County of Los Angeles Housing Authority

This agency administers the Section 8 Housing Voucher Program and Public Housing Program. Fifty-three Signal Hill householders are receiving rental assistance from the voucher program. The HA's area of operation is all of the unincorporated areas of the County and some incorporated cities.

## Los Angeles County Continuum of Care (CoC)

The CoC is a network of private and public sector homeless service providers, designed to promote community-wide planning and the strategic use of resources addressing homelessness. The CoC seeks to improve coordination and integration with mainstream resources and other community programs for people who are experiencing or are at-risk of becoming homeless. Annually, the CoC receives HUD funding to support programs such as permanent supportive housing, rapid re-housing, supportive services, Homeless Management Information System (HMHS), and CoC planning.

## Non-Profit Housing Organizations

There are several non-profit organizations located in Los Angeles County and other nearby counties. The City has partnered with non-profit housing developers to produce affordable housing developments. During the development of the *2021-2029 Housing Element*, the Community Development Department conducted continuous outreach with affordable housing developers.

The City's outreach to affordable housing developers included:

- AMCAL
- Jamboree Housing Corporation
- Mercy Housing California
- Meta Housing Corporation
- Thomas Safran & Associates
- Abode Housing

**Attachment A**  
**Description of Los Angeles County HOME Program**

## **Overview**

Los Angeles County is an Urban County-participating jurisdiction for HUD's HOME Investment Partnerships (HOME) Program. It receives an annual formula allocation of HOME funds that can be used to promote affordable housing in the County through activities such as homeowner rehabilitation, homebuyer activities, rental housing development, and tenant-based rental assistance. LACDA administers the HOME Program for the County in unincorporated areas and in 46 participating cities. Signal Hill is one of the 46 participating cities.

HOME activities have specific requirements such as the 25 percent match with non-federal funds for HOME dollars allocated to projects. Eligible activities include homebuyer assistance and rehabilitation of owner-occupied properties. Homebuyer programs are structured for acquisition, acquisition and rehabilitation, and development of affordable homes. Rental housing is assisted through the development of new projects, as well as rehabilitation and/or acquisition of existing rental housing units.

In some cases, HOME funds used to finance the development of affordable rental housing may be used in conjunction with other funding sources including, but not limited to, HUD's HEARTH Act programs. In cases where HOME funds were used in permanent supportive housing or special needs rental units, specific project leasing and tenant selection plans may be approved to utilize a Coordinated Entry or Coordinated methodology in accordance with HUD guidelines.

## **Available Funds**

The new program year (2021–2022) will begin on July 1, 2021. The 2021–2022 new HOME allocation totals \$8,998,893. The County will include \$4,500,000 of cumulative HOME program income received since July 1, 2020 for 2021–2022 activities that benefit persons of low- and moderate-income.

## **Federal Investment Criteria**

Federal regulations require LACDA to apply the following criteria to HOME funds:

- Beneficiary incomes must not exceed 80 percent of area median income (AMI), adjusted for household size. LACDA policy targets 20% of the units for renter households earning at or below 50 percent of AMI.
- Up to 10 percent of the grant can be spent on administration and planning.
- At least 15 percent is set-aside annually for projects by eligible Community Housing Development Organizations (CHDOs).

## **Homebuyer Programs**

A portion of the HOME funds support homebuyer programs. The HOME loans will be used in combination with all of LACDA's homeownership programs. LACDA currently uses HOME funds to facilitate the purchase of existing and newly constructed housing by issuing HOME loans to eligible homebuyers. LACDA also offers a variety of homeownership programs that assist a broad range of income groups throughout

the County. HOME loans will be available to applicants of these programs who meet HOME eligibility requirements, namely, household income does not exceed 80 percent of AMI and the home is located in one of the 46 participating cities or the unincorporated areas.

LACDA requires all homeownership applicants to participate in homebuyer education programs that cover all aspects of owning a home, with emphasis on post-purchase education addressing foreclosure prevention, predatory lending, and loss mitigation. All recipients of HOME funds will be required to attend these programs in order to ensure their suitability to undertake and maintain homeownership.

## Affirmative Marketing Policy and Procedures

LACDA's policy is to disseminate information to the public regarding fair housing laws and its own guidelines for participation in the HOME Program. In accordance with federal regulations (24 CFR 92.351), the LACDA adopted an affirmative marketing policy and procedures. The LACDA is committed to equal opportunity in housing choices in the local housing market without discrimination based on race, color, religion, sex, and national origin.

LACDA is also committed to affirmative marketing, which is implemented in the HOME Program through a specific set of steps that the LACDA and participating groups follow.

LACDA will inform the public, potential tenants, potential homebuyers, and property owners about Federal fair housing laws and the affirmative marketing policy using the following items:

- Equal Housing Opportunity logotype or slogan in press releases, news advisories, solicitations for owners and in all written communications
- Special news releases in local neighborhood and ethnic newspapers and public service announcements in the local electronic media
- Meetings to inform owners regarding program participants

LACDA has established procedures to ensure that owners of rental housing developments assisted by the HOME Program solicit applications from persons in the housing market area who are not likely to apply for the housing without special outreach. The owners will solicit applications through such locations as community-based organizations, places of worship, employment centers, fair housing groups, or housing counseling agencies.

**APPENDIX G**  
**PROGRESS REPORT**

# APPENDIX G

## PROGRESS REPORT

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### GOVERNMENT CODE REQUIREMENTS

HCD suggests that the Progress Report (officially known as review and revision) discuss:

"Appropriateness of goals, objectives and policies" (Section 65588(a)(1)): A description of how the goals, objectives, policies and programs of the updated element incorporate what has been learned from the results of the prior element.

"Effectiveness of the element" (Section 65588(a)(2)): A comparison of the actual results of the earlier element with its goals, objectives, policies and programs. The results should be quantified where possible (e.g., rehabilitation), but may be qualitative where necessary (e.g., mitigation of constraints).

"Progress in implementation" (Section 65583(a)(3): An analysis of the significant differences between what was projected or planned in the earlier element and what was achieved.

### APPROPRIATENESS OF GOALS, OBJECTIVES AND POLICIES

Section II – Housing Program – establishes goals, objectives and policies for the five program categories mandated by State law. Several of the goals and policies are appropriate to carry forward to the 2021-2029 planning period. However, the goals and polices have been updated to include many important pro housing policies such as an emphasis on by right zoning. In addition, a plan of incentives for development of ADUs is included in Section II.

The quantified objectives have also been adjusted to account for the accomplishments made during the 2013-2021 planning period. Quantified objectives have been adjusted in regard to new housing production, housing rehabilitation, and housing code enforcement.

### EFFECTIVENESS OF THE ELEMENT

The goals, policies and programs of the Housing Element have effectively addressed the City's housing needs, including the Regional Housing Needs Assessment (RHNA) allocation.

Signal Hill's estimated Regional Housing Needs Assessment (RHNA) allocation for the 2014- 2021 Housing Element cycle was 169 units broken down by the following income levels; Refer to Table G-1.

Table G-2 reports on housing production progress between 2014 and 2020.

Seventy-nine percent of the RHNA allocation was met through the end of 2020. A 16-unit above moderate income development was constructed in 2021. This development increased the above moderate housing production total to 57 units, or 81% of the RHNA allocation.

Between 2014 and June 2021, three ADUs have been constructed; three ADUs are under construction; three ADUs are in plan check; and two are under review.

Housing production through mid-year 2021 has met 88% of the total RHNA allocation and 100% of the very low and low income allocation.

Effectiveness in meeting the housing needs of special needs populations:

Through program implementation during the 2014-2021 planning period, the City of Signal Hill has made considerable progress in addressing the housing needs of the special populations.

Lower income households have been assisted through:

- Adequate sites program: rezoning and developing a 78-unit affordable housing project
- Hill Street Affordable Housing Development program: completion of a 72-unit workforce housing project
- First Time Homebuyer program: While funding was not available for the First-time Homebuyer program, the City held a first-time home buyers forum to educate and provide financial and real estate information and contacts to first time home buyers. The City maintains information about non-city programs on the City's website and refers inquiries on a regular basis
- Extremely low-income families were assisted through the Section 8 Rental Assistance program (51 households in 2021).

Disabled and Senior households were assisted through:

- Zoning Ordinance Amendments program: Adoption of a Reasonable Accommodations Ordinance to establish procedures to provide relief from the strict application of zoning and other land use regulations to ensure equal access to housing for persons with disabilities.
- Outreach Program for Persons with Developmental Disabilities program: City works closely with the Long Beach Harbor Regional Center service area and disabled residents are eligible for programs and services. During the planning period the City conducted an information sharing meeting to better implement available programs and specifically confirmed methods to obtain services under the COVID-19 pandemic health restrictions.

While the program results were favorable, the City's efforts to address the needs of special needs groups are hindered by lack of funding. For example, the Housing Rehabilitation Program was not implemented due to lack of funding from the state's Cal Home Program.

**Table G-1: RHNA Allocation**

Income Level	5 <sup>th</sup> Cycle RHNA/Units
Very Low	44
Low	27
Moderate	28
Above Moderate	70
Total	169

**Table G-2: Housing Production Progress**

Income Level	RHNA Allocation	Permits Issued 2014-2020	% of RHNA Allocation
Very Low	44	44	100%
Low	27	27	100%
Moderate	28	21	75%
Above Moderate	70	57	81%
Combined	169	149	88%

## PROGRESS IN IMPLEMENTATION

The Progress Report chart starting on the next page describes the progress made toward implementation of the individual programs included in the 2013-2021 Housing Element. Overall, significant progress has been made toward implementing the individual programs. Thirteen of the 16 programs have been accomplished or completed. Three programs have been partially completed: the development of an ADU handbook; adoption of a density bonus ordinance; and the housing rehabilitation program.

The first time homebuyer assistance and housing rehabilitation programs depend on County funding, which is limited. Additionally, few resident households apply for assistance.

The 2021-2029 Housing Element includes a plan of incentives for the development of ADUs. The City is in the process of preparing a Density Bonus Ordinance.

**Table G-3: Progress Report: 2013-2021 Housing Element**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Name of Program</b>	<b>Objective</b>	<b>Timeframe in H.E</b>	<b>Status of Program Implementation</b>
Adequate Sites Program	Minimum of 13 housing units for lower income households	12/3/2013	Completed by Dec. 3, 2013 by re-zoning affordable housing site to accommodate 72 units, resulting 78 total lower income units compared to 71 units required by the Jan. 2014 - Oct. 2021 RHNA.
Second Unit Development Program	20 second units constructed	October 2013-October 2021	In progress: 8/20 Units to date. In 2014, a bldg. permit was issued for 1 2nd unit at 3242 Cerritos Ave. In 2015, a building permit was issued for a new duplex at 924 Vernon Street (an existing SFD was demolished) for a net increase of 1 unit. In 2016, a building permit was issued for a second unit and a remodel of the existing SFD at 3347 Brayton Avenue for a net increase of 1 unit. No second unit permits were issued in 2017. In 2018, 2 bldg. permits were issued for ADU's at 2819 ½ E. 19th St. and 2060 ½ Raymond Ave. In 2019, 2 bldg. permits were issued for ADU's at 2477 ½ Gaviota Ave., and 1989 ½ Dawson Ave., and plans were submitted for 3309 ½ Lemon Ave. In 2020, 3 building permits were issued for 2260 ½ Rose Ave., and plans were submitted for 2239 ½ Gaviota Ave., 1870 ½ Temple Ave., and 1900 ½ Temple Ave.
No Net Loss Program	Establish the evaluation procedure to monitor housing capacity.	June-July 2014	Completed. In 2019, all residential units identified in the 2013-2021 Housing Element to accommodate the City's share of regional planning need remain zoned for residential uses.
Zoning Ordinance Amendments to Provide a Variety of Housing Types	Adopted Amendments	January 7, 2014 and June-July 2014	Completed - On Nov. 8, 2016, The City adopted a Reasonable Accommodations Ordinance to establish procedures to provide relief from the strict application of zoning and other land use regulations

**Table G-3: Progress Report: 2013-2021 Housing Element**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Name of Program</b>	<b>Objective</b>	<b>Timeframe in H.E</b>	<b>Status of Program Implementation</b>
			to ensure equal access to housing for persons with disabilities. On
			January 23, 2018, the City amended their Emergency Shelters Ordinance to more accurately reflect that Emergency Shelters are allowed in the Commercial General (CG) rather than the Commercial Residential (CR) zoning district.
Section 8 Rental Assistance for Cost Burdened Lower Income Households	55 units for lower income renter households	October 2013-October 2021	Ongoing - The Housing Authority of the County of Los Angeles (HACoLA) administers the Section 8 Housing Choice Voucher Program. Informational housing assistance links are provided on the City website. In 2015, there were 56 families receiving housing assistance who reside in Signal Hill. In 2016, there were 50 families receiving housing assistance who reside in Signal Hill. In 2017, there were 43 families receiving housing assistance who reside in Signal Hill. In 2018, there were 46 families receiving housing assistance who reside in Signal Hill. In 2019, there were 49 families receiving housing assistance who reside in Signal Hill. In 2020, there were 51 families receiving rental housing assistance who reside in Signal Hill.
Hill Street Affordable Housing Development	72 housing units for lower income households	ZOA on December 3, 2013; Development October 2013-October 2021	Completed - The 72 unit workforce housing project was issued a certificate of occupancy in 2018.
First Time Home Buyer Assistance	5 lower income households	October 2013-October 2021	In process - The City does not have money in the affordable housing fund due to the dissolution of the Signal Hill Redevelopment Agency. In 2017, the City held a first time home buyers forum to educate and provide financial and real estate information

**Table G-3: Progress Report: 2013-2021 Housing Element**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Name of Program</b>	<b>Objective</b>	<b>Timeframe in H.E</b>	<b>Status of Program Implementation</b>
			and contacts to first time home buyers. The City maintains information about non-city programs on the City's website and refers inquiries on a regular basis.
Outreach Program for Persons with Developmental Disabilities	Coordinate with Harbor Regional Center	Implement outreach components mid-year 2015	In process - The City is within the Long Beach Harbor Regional Center service area and disabled residents are eligible for programs and services. Informational links are posted on the City website. The Eucalyptus Sea Breeze Manor apartments located in the City were built using funding through HUD's Section 811 Supportive Housing for the Persons with Disabilities program. Residency is restricted to persons who earn 50% of the Area Median Income (AMI) or less. Similar to other rental assistance programs such as Section 8, residents' rents are based on their income and the tenant contribution is set at 30% of the tenant's income. In 2017, representatives from the Regional Housing Authority and City staff, including the Police Department, conducted an information sharing meeting to better implement available programs. In 2018, the City confirmed their local contact with the LBHRC was Nancy Speigel, Director of Information and Development. In 2019, the City confirmed their local contact with LBHRC was Nancy Speigel, Director of Information and Development. In 2020, the City confirmed their local contact with LBHRC was Nancy Speigel, Director of Information and Development and also confirmed methods to obtain services under the COVID-19 pandemic health restrictions.

**Table G-3: Progress Report: 2013-2021 Housing Element**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Name of Program</b>	<b>Objective</b>	<b>Timeframe in H.E</b>	<b>Status of Program Implementation</b>
Extremely Low Income Housing Program	Assist 57 extremely low income households	October 2013-October 2021	In 2019, all residential units identified in the 2013-2021 Housing Element to accommodate the City's share of regional planning need remain zoned for residential uses. In 2021, there were 51 families receiving Section 8 housing services who reside in Signal Hill.
Zoning Ordinance Amendments to Remove Governmental Constraints on Housing for the Disabled	Adopted Amendments	June-July 2014	<p>In process - On November 5, 2015, the Community Development Department had a training session regarding reasonable accommodations on the basis of disability/handicap. The City also entered into a conciliation agreement/voluntary compliance agreement for an addition to an existing residential dwelling.</p> <p>On Nov. 8, 2016, The City adopted a Reasonable Accommodations Ordinance to establish procedures to provide relief from the strict application of zoning and other land use regulations to ensure equal access to housing for persons with disabilities.</p> <p>In 2019, the City received one request for reasonable accommodation to install an elevator in a residence. Staff reviewed the project, but the homeowner did not pursue the project.</p> <p>In 2020, the City continued to provide public information regarding reasonable accommodation procedures electronically and on the City web site, due to City Hall closures under COVID - 19 pandemic regulations.</p>
Zoning Ordinance Amendments to Encourage and Facilitate the Development of Affordable Housing - Update Density Bonus Ordinance (DBO)	Adopted DBO	June-July 2014	Ongoing - In 2018, staff began preparation of a draft DBO, which was expected to be reviewed by the Planning Commission in April or May 2019 and adopted by City Council in May or June 2019. However, City staff and resources ran short and DBO law has changed. Therefore, the City will be using

**Table G-3: Progress Report: 2013-2021 Housing Element**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Name of Program</b>	<b>Objective</b>	<b>Timeframe in H.E</b>	<b>Status of Program Implementation</b>
			their SB2 approved funding to hire a consultant to prepare a DBO ordinance in 2021/2022.
Annual Housing Monitoring Program	Monitor height limits and parking standards as potential constraints	October 2013-October 2021	Completed - The City has eliminated the height limit and parking constraints by approving increased height limits and reduced parking requirements for housing developments with affordable housing units.
Housing Code Enforcement Program	2-5 new cases per month	October 2013-October 2021	Completed and Ongoing - In 2015, the City closed 58 code enforcement cases. In 2016, the City closed 67 code enforcement cases. In 2017, the City closed 68 code enforcement cases. In 2018, the City closed 49 code enforcement cases. In
			2019, the City closed 39 code enforcement cases. In 2020, the City closed 40 code enforcement cases.
Housing Rehabilitation Program	20 housing units	October 2013-October 2021	In 2018, 2019, and 2020, the City continued to monitor the program, but the CalHome Program did not make funds available for new applications. The program is updated to focus on identifying and applying for new funds for housing rehabilitation assistance.
Fair Housing Services Program	65 lower-income households	October 2013-October 2021	Ongoing - The City provides residents with flyers provided by the Housing Rights Center and participated in a fair housing training session conducted by the City Attorney's office in 2015. In 2020, a second session was postponed due to COVID-19 pandemic restrictions. This program is a part of the 6 <sup>th</sup> Cycle Housing Element programs.
Energy Conservation Program	Promote Primer and encourage weatherization and energy efficient home improvements	October 2013-October 2021	Ongoing - The City implements the most current, 2019 CALGreen requirements and promotes Green Building by providing developers with information on the City's Green Building policy.

**Table G-3: Progress Report: 2013-2021 Housing Element**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Name of Program</b>	<b>Objective</b>	<b>Timeframe in H.E</b>	<b>Status of Program Implementation</b>
			<p>The City's Sustainable City Committee (SCC) also promotes energy conservation programs through accomplishment of local goals and received two Beacon Awards for Sustainability in 2018. A Gold Level Beacon Award for Sustainability Best Practices and a Silver Level Award for 6% Energy Savings.</p> <p>In 2020, the SCC received a Platinum Level Beacon Award and has had oversight of the 2020 application for Sustainability Best Practices.</p> <p>In 2021, the SCC recommended, and the City Council approved a resolution to join the Energy Upgrade California programs to assist with continued outreach and education regarding methods and programs to conserve energy at home and for businesses.</p>

**ENVIRONMENTAL RESOURCES ELEMENT  
of the  
SIGNAL HILL GENERAL PLAN**

City of Signal Hill  
Draft - For Discussion Only

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\* Maps are in the map pocket at the end of the Environmental Resources Element.

## **L. INTRODUCTION**

### **A. Purpose and Scope**

The purpose of the Environmental Resources Element is to improve the overall quality of life for Signal Hill residents through proper guidance in the management of natural resources and open space lands. The goals, policies and implementation programs for the Signal Hill Environmental Resource Element are guidelines that will direct the timing, location, amount and uses of resources, such as air, groundwater, soils, wildlife and minerals, as well as those properties that are generally unimproved.

Data in the Signal Hill Environmental Resources Element reveals current conditions for the atmospheric environment, water and hydrology, land resources, biological resources, historical, paleontological and archaeological resources and open space and energy resources.

### **B. Legislative Authorization**

The State of California recognizes open space lands as a valuable resource not only for their aesthetic, recreational and public health qualities, but as a limited natural resource. The state also recognizes that all natural resources are limited and, along with open space lands, are part of an overall ecosystem. The state has mandated, therefore, that each city prepare Open Space and Conservation Elements in its General Plan to provide overall, comprehensive guidelines for the protection and proper management of open space lands and natural resources. The Signal Hill Environmental Resources Element is a combination of the required Open Space and Conservation Elements and includes all state-mandated requirements for each element.

California state law defines open space land as "...any parcel or area of land or water which is essentially unimproved and devoted to an open-space use...."<sup>1</sup> Section 65560 of the California Government Code describes the requirements for the open space element as follows:

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<sup>1</sup> State of California. Government Code Section 65560 (b).

"...(1) for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life...; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams and watershed lands; (2) open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply; (3) open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails and scenic highway corridors; (4) open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality."

California Government Code Section 65302(d) specifies that the purpose of a Conservation Element is "...for the conservation, development and utilization of natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources." In addition, "...the conservation element may also cover: (1) the reclamation of land and waters; (2) prevention and control of the pollution of streams and other waters; (3) regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan; (4) prevention, control and correction of the erosion of soils, beaches and shores; (5) protection of watersheds; (6) the location, quantity and quality of the rock, sand and gravel resources; and (7) flood control."

#### C. Justification for Combination of the Conservation and Open Space Elements

Conservation and open space elements are complementary and can be legally combined into one, as in the City of Signal Hill Environmental Resources Element. Since requirements for the Conservation Element closely parallel those categories for an Open Space Element that deal with "...open space for preservation of natural resources and open space for the managed production of resources," they are closely linked and should be combined.

**D. Relationship of the Environmental Resources Element to Other General Plan Elements**

The Environmental Resources Element is perhaps most closely related to the Land Use Element in the Signal Hill General Plan. Both elements examine and provide policy guidelines related to natural resources (e.g., water, agriculture, soil, mineral and wildlife resources) and aesthetic, cultural and recreational resources (e.g., parks, scenic areas, views and public access). The Environmental Resources Element is also related to the land use, safety and noise elements in terms of hazards (e.g., oil production and flooding). For example, the Land Use Element provides guidelines for regulating the development of residential land uses in sloped areas, whereas the Environmental Resources Element locates and defines those areas and specifies means of reducing the hazards where possible.

## **II. BACKGROUND AND EXISTING CONDITIONS**

### **A. Atmospheric Environment**

#### **1. Climate**

Signal Hill is located within the South Coast Air Basin. The annual average temperature in the city ranges from the mid 50 degrees Fahrenheit ( $^{\circ}$ F) in winter to the mid 70 $^{\circ}$ F in the summer. Average temperatures in January range from 46 $^{\circ}$ F to 65 $^{\circ}$ F and in July from 62 $^{\circ}$ F to 82 $^{\circ}$ F. Freezing conditions and temperatures over 100 $^{\circ}$  occur infrequently. Annual precipitation varies, with a long-term average of about 15.4 inches per year. Annual average relative humidity in January ranges from 50 to 75 percent daily, whereas in July it varies from 60 to 85 percent.

The prevailing wind pattern is a daytime sea breeze, flowing toward the east and northeast with little seasonal variability. Nighttime winds are light, and although variable, often have an offshore character that flows toward the south/southwest. During the fall and early winter, Santa Ana wind conditions sometimes occur. These relatively strong winds flow from the mountains in the east toward the southwest in the vicinity of Signal Hill and generally increase local temperatures.

#### **2. Air Quality**

The South Coast Air Basin experiences light average wind speeds, which results in the slow dilution of air contaminants. The vertical dispersion of air contaminants within the South Coast Air Basin is frequently limited by the presence of a persistent thermal inversion, or inversions, between ground level and about 1,500 feet (a thermal inversion is an atmospheric layer exhibiting a sudden rise in temperature with increasing height above the ground). A thermal inversion generally traps vertical air movement, preventing it from mixing upward and dispersing. The distance from the ground surface to the bottom of the lowest inversion layer is called the "mixing height." This height frequently increases vertically during the day. Winter inversions frequently break up completely by midmorning. Summer inversions often break up in the afternoon. This phenomenon, along with the arrival of the sea breeze front, sometimes results in a sudden clearing up of visible smog during summer afternoons in the coastal areas.

Most air pollutants are released near the ground surface and mix upward as far as the mixing height will allow. A combination of a low inversion and low windspeed results in the least dilution and greatest concentrations of air contaminants. Air pollution levels are lowest when there is no inversion and moderate to strong windspeeds (10 mph or more) are prevalent.

These atmospheric conditions usually follow a daily and seasonal pattern. Pollutant concentrations of carbon monoxide and nitrogen oxides can be highest during the night and early morning hours. Photochemical smog (ozone, etc.) is the principal concern during summer and early fall due to greater solar intensity and a low mixing height level. Ozone levels are at their lowest during winter months due to an increased mixing height during the hours of strong sunlight.

Air quality in an area is a function of the primary and secondary pollutants, the existing regional ambient air quality, and the topographical and meteorological factors influencing the transport and dispersion of pollutants. Air quality is determined by both primary and secondary air pollutants. Primary pollutants are emitted from a source into the atmosphere and include carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), reactive organic compounds (ROC), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>) and total suspended particulates (TSP). Secondary pollutants are created with the passage of time in the air mass by chemical and photochemical reactions. Examples of secondary pollutants include oxidants, primarily ozone (O<sub>3</sub>) and sulfate particulates.

### **3. Ambient Air Quality**

Ambient air quality is given in terms of state and federal standards adopted to protect public health with a margin of safety. Air quality trends are shown in Table 1. In addition to ambient standards, California has adopted episode criteria for oxidants, carbon monoxide, sulfur dioxide, nitrogen dioxide and particulate matter. The episode levels represent short-term exposures at which public health is actually threatened. Air quality data are collected by the South Coast Air Quality Management District (SCAQMD). The SCAQMD air monitoring station located at Long Beach Airport is most representative of Signal Hill's ambient air quality. Table 1 is based on data from this station, and the following air quality trends have developed in Signal Hill.

**TABLE 1**  
**AIR QUALITY TRENDS, 1981-1984**  
**LONG BEACH AIR QUALITY MONITORING STATION<sup>1</sup>**

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Ozone ( $O_3$ )				
Highest concentration (parts per million)	0.23	0.22	0.30	0.27
Number of days state/federal standards exceeded	30/13	18/6	35/16	32/13
Carbon Monoxide (CO)				
Highest concentration (parts per million)	13.0	14.0	14.0	14.0
Number of days state/federal standards exceeded	0/0	0/0	0/0	0/0
Nitrogen Dioxide ( $NO_2$ )				
Highest concentration (parts per million)	0.37	0.30	0.37	0.35
Number of days state/federal standards exceeded	13/ND	4/ND	3/ND	7/1
Sulfur Dioxide ( $SO_2$ )				
Highest concentration (parts per million)	0.14	0.09	0.12	0.32
Number of days state/federal standards exceeded	0/0	0/0	0/0	1/0
Total Suspended Particulates (TSP)				
Highest concentration (micrograms per cubic meter)	292	192	212	195
Number of days state/federal standards exceeded	22/2	13/0	16/0	15/0

Ozone: Ozone is the air pollutant of primary concern in Signal Hill and adjacent areas. Ozone is formed by the reaction of hydrocarbons and oxides of nitrogen in the presence of bright sunlight. Pollutants emitted upwind react while being carried downwind to produce the oxidant concentrations experienced in this area. The state 1-hour ozone standard was exceeded an average of 29 days each year at the Long Beach air monitoring station and federal standards were exceeded an average of 12 days each year from 1981-1984.

Carbon Monoxide: Carbon monoxide is a primary pollutant that is concentrated near major roadways and freeways. Carbon monoxide levels did not exceed state or federal standards between 1981 and 1984.

Nitrogen Dioxide: Nitrogen dioxide levels exceeded the state  $NO_2$  standard an average of 7 days each year between 1981 and 1984, and an average of 0.25 days per year during this period.

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1 South Coast Air Quality Management District, Air Quality Data 1981-1984.  
 California Air Resources Board, Air Quality Data, 1985.

Sulfur Dioxide: State sulfur dioxide standards were exceeded an average of 0.25 days per year during the period 1981 to 1984. Federal standards were not exceeded.

Total Suspended Particulates: The state particulate standard was exceeded an average of 17 days each year, monitored at the Long Beach Station. These episodes are primarily due to natural sources, but are also linked to grading operations and motor vehicle emissions. The federal particulates standard was exceeded an average of 0.50 days each year from 1981 to 1984.

#### **4. Air Quality Management**

The State Lewis Air Quality Act (1976) and the Federal Clean Air Act Amendments (1977) require the development of a program to meet state and federal air quality standards in the South Coast Air Basin (SoCAB). The state has indicated a time frame of "...at the earliest achievable date" and the federal government required attainment of all primary national ambient air quality standards by 1982, with a possible extension of attainment deadlines to 1987 for carbon monoxide and photochemical oxidants. The SoCAB has been designated a nonattainment area for oxidants, carbon monoxide, nitrogen dioxide and total suspended particulates.

In February 1979, the Southern California Association of Governments (SCAG) and the South Coast Air Quality Management District (SCAQMD) adopted the Air Quality Management Plan (AQMP) for the South Coast Air Basin. After several revisions, the AQMP was adopted by SCAG and the SCAQMD on October 15, 1982. AQMP projections and mitigation measures are based on the SCAG-82A Growth Forecasts. The AQMP recommends control measures that, when implemented, will succeed in reducing primary air emissions to the level of the state and federal air quality standards by 1987. The control measures rely heavily on continued technical improvements to both stationary and mobile pollution control equipment and the implementation of transit, rideshare and congestion relief.

Rules and Regulations: The SCAQMD has published a set of "Rules and Regulations" to reduce both stationary and mobile source pollutant emissions. This document outlines permits, fees prohibitions, procedures for hearings, emergency measures,

order to abatement, standards of performance for new stationary sources, and standards for additional specific air contaminants (Federal Register, Vol. 46, No. 13, January 13, 1981).

Of particular concern to cities within the South Coast Air Basin is Regulation IV, Prohibitions, of the "Rules and Regulations," which relates to the emission of fugitive dust (Rule 403). Regulation IV is one of the few rules and regulations applicable to site-specific projects that has feasible means of reducing fugitive dust. Rule 403 mandates that "...a person shall not cause or allow fugitive dust emissions from any transport, handling, construction, or storage activity, so that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source." Also, "...a person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, cleaning of land and solid waste disposal operations" (Rule 403(b)) and "...to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations" (Rule 403(d)).

Los Angeles County Subregional Element: Los Angeles County has developed a "Subregional Element for the 1982 Regional Air Quality Management Plan." Several measures are listed in the Los Angeles element that may have applicability to future projects in Signal Hill. These include encouraging new development to incorporate commercial and industrial uses near residential communities to reduce trips and trip lengths. The element also encourages several parking strategies, carpool and bus alternatives, the promotion of bicycle rack installation, and tree and shrub planting to improve air quality.

## B. Hydrology

### 1. Surface Water

Surface water in Signal Hill occurs in the form of runoff that follows the topographic features of the Hill.<sup>1</sup> Figure 1, Drainage, shows the overall surface water flow pattern in Signal Hill. In the past, the City has been subject to flooding in the low-

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1 Note: The Hill is the highest point and the most notable topographic feature of Signal Hill. It is located in the southeast portion of the City and is a major feature of community identity.

The California Bowl Detention Basin is located between Spring Street, Orange Avenue, Willow Street, and California Avenue in the City of Long Beach. This basin provides flood protection for the west drainage area of the city. Presently, storm runoff in the area east of the basin is conveyed as street flow in a northerly direction to a City of Long Beach storm drain located along the south side of the San Diego Freeway. This drain conveys these street flows and runoff from the San Diego Freeway to the basin. The basin outlets into a storm drain located along 27th Street and is ultimately discharged into the Los Angeles River.

In addition to these major drainage facilities, three minor storm drains exist within the City. These storm drains are the uppermost reaches of major drainage facilities existing within the City of Long Beach (see Figure 1, Drainage).

The first storm drain is located along Wardlow Road, with a lateral drain along California Avenue and Cherry Avenue. This drain provides flood protection for the portion of the City located north of the San Diego Freeway.

The second minor drain is located in the west drainage area of the city. This drain serves as an outlet storm drain for a sump condition that exists at the intersection of Atlantic Avenue and Columbia Street.

The third minor drain is located in the south drainage area of the city along 21st Street. This storm drain receives runoff from the area between Junipero Avenue, 21st Street, Temple Avenue and Pacific Coast Highway.<sup>1</sup>

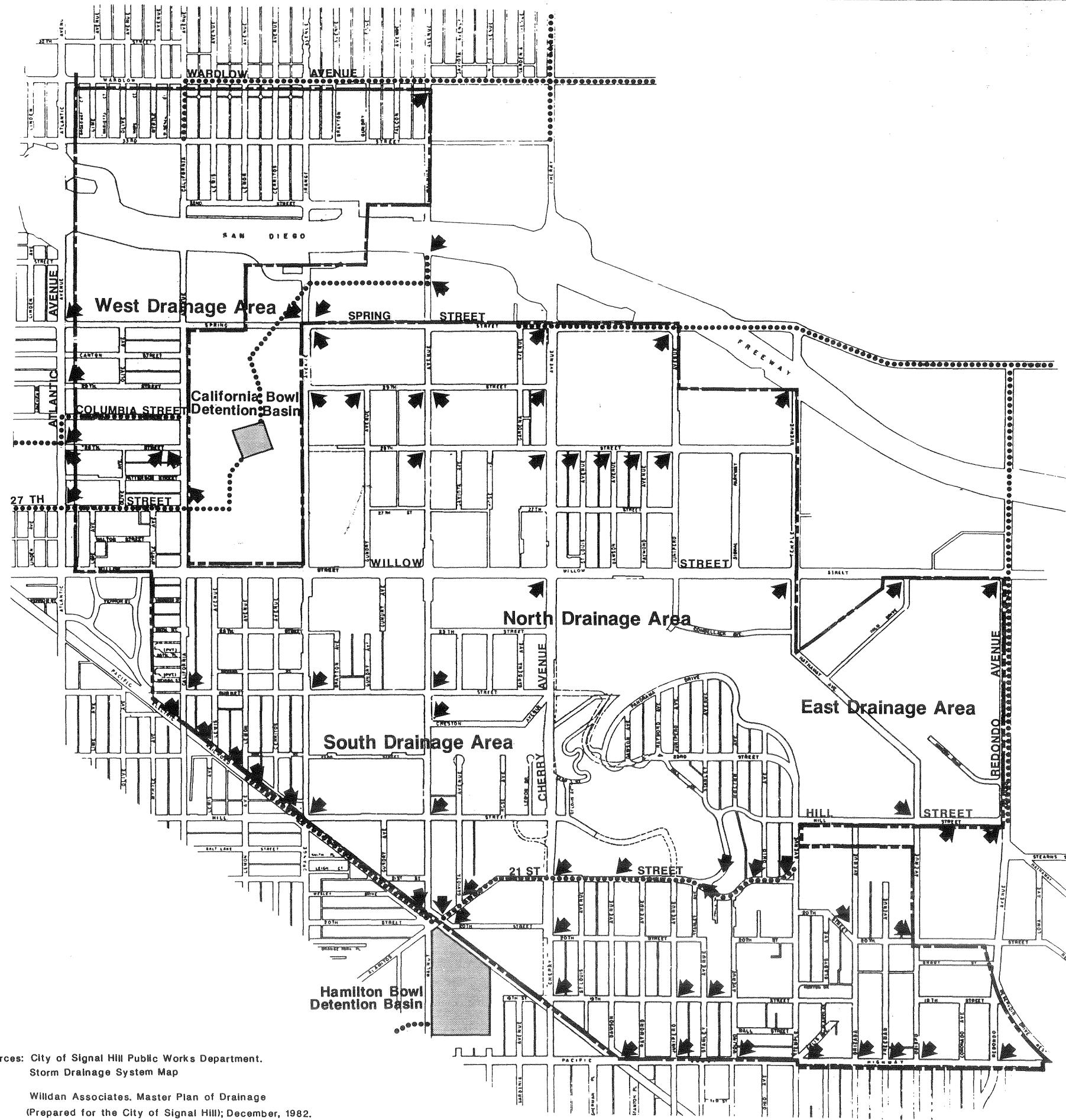
## 2. Groundwater

Signal Hill is located within the Long Beach Plain groundwater basin. The basin includes the Gage, Lynwood, Silverado and Sunnyside aquifers, which developed in the buried stream channels and flood plain deposits of the ancient Los Angeles and San Gabriel River drainage courses.<sup>2</sup>

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1 City of Signal Hill, The Master Plan of Drainage (p.5).

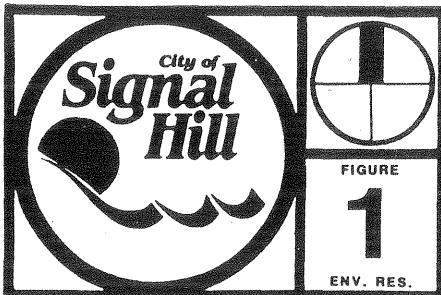
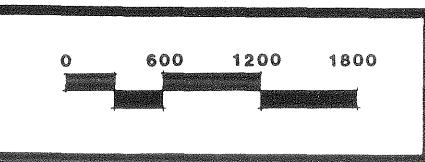
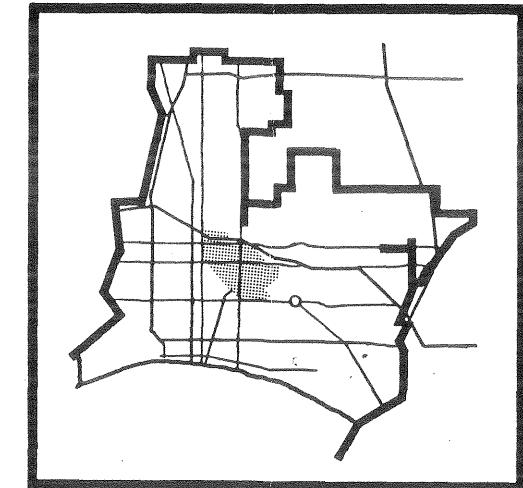
2 Jim Hinzel and Associates. Draft Environmental Impact Report (Tentative Tract 43263) for Belmont Vista Development. February 1985. p IV-2.



## DRAINAGE

### LEGEND

- .... Storm Drain
- Direction of water flow
- [Shaded Box] Detention Basin



Water from the basin and delivered to Signal Hill residents is of good quality. All county, state and federal water quality standards have been met or exceeded in the past and in the current water supply. There are occasional consumer complaints about rust in the system that are remedied immediately by flushing the lines involved. Water supply is discussed in some detail in the Circulation and Infrastructure Element.

### C. Land Resources

#### 1. Geology

Knowledge and awareness of the community's underlying geologic structure and proximity to major fault lines is critical for the many land use and developmental possibilities in the seismically active area of Southern California. The land in Los Angeles County is in a youthful state of geological evolution, and is considered unstable.<sup>1</sup> Many active and potentially active earthquake faults are found in the county. Liquefaction, landsliding, shattered ridges, land settlement, tsunamis and seiches are other seismic-related hazards found in the region. Many areas are subject to local earth movement, such as landslides, rockslides and subsidence. Rocks and soils prone to instability include alluvium, terrace deposits, shale, metamorphic schist and siltstone.

Identification of geologic hazards and seismic risk in Signal Hill is essential because of the City's close proximity to the most important geologic feature in the Southern California region: the Newport-Inglewood Fault. Movement within this fault region was responsible for the 1933 Long Beach earthquake, which registered 8.3 on the Richter scale (refer to the Safety Element for additional discussion on seismic hazards).

The Newport-Inglewood Fault is a normal fault with a strike slip fault component. Several other well-known, potentially active faults are located within the same geographical area as the Newport-Inglewood Fault: the Cherry Hill Fault, the Dickler Fault, the Northeast Flank Fault and the Reservoir Hill Fault (refer to the Safety Element, Figure 2, and Section II.B., Geologic Hazards of the Safety Element).

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<sup>1</sup> Los Angeles County General Plan. November 1980.

## 2. Soils

Signal Hill is located in an area known as the Los Angeles Coastal Plain. The plain sits on an extraordinarily deep marine and nonmarine sedimentary base that has an important bearing on earthquakes, petroleum deposits and subsidence problems. Table 2 shows geologic zones in Signal Hill.

**TABLE 2**  
**GEOLOGIC ZONES**

<u>Zone</u>	<u>Thickness (feet)</u>		<u>Composition</u>
—	500		Sand, reddish-brown, silty, poorly consolidated; siltstone; and gravel
Upper Gas zone	—	2,500	Sand, gray, medium to coarse grained, poorly consolidated, pebbly. Shale, olive to dark brown, massive, silty.
Upper Wilbur zone	1,750 2,500		
Lower Wilbur zone	2,650	2,500	Sand, fine to coarse grained, occasionally pebbly, with thin calcareous sandstone interbeds. Shale, dark grey to dark brown, sandy, micaceous.
Alamitos zone	3,000		
Brown zone	4,800	9,000	Sand, light grey, fine to medium grained, massive, firm to friable, with thin interbeds of silt and silty shale. Shale dark brown to gray-black, hard, fissile, biotitic.
Deep zone	5,500		
—	—	9,500	
DeSoto zone	9,500		
—	—	—	Talcshist, green to bluish green, containing some glaucophane and quartz.

Source: City of Signal Hill. Derived from summary of California Oil Fields, State Division of Oil and Gas, 1968.

For the most part, soils within the City are composed of weathered alluvium and are thus classified as silts and sands. The following is a description of the soil composition and conditions in the City.

Southeast Section: Upper natural soils consist of fine to medium fine sand and silty sand generally nonexpansive with isolated areas of slightly expansive, sandy clays and clayey fine sands. Fill materials are scattered in this area and vary in depth up to 25 feet.

Southwest Section: Upper natural soils consist of sand, very fine to fine to medium, silty sand and clayey fine to medium sand essentially nonexpansive. Fill materials may also be encountered throughout the area up to 18 feet deep, generally in the petroleum production areas.

East Central Section: Upper natural soils consist of clean sands, silty sands, silts and sandy silts, and silty and sandy clays. There is a slight change in soil composition from nonexpansive in the eastern portions of this area to slightly expansive in the western portions of the area. High contamination of natural soils occurs with petroleum production operations in this section. Fill materials of varying depth may be found throughout this section and are mixed with a considerable amount of inorganic debris.

West Central Section: Natural soils consist of fine sands, silty sands, clayey sands and sandy clay. Soils are slightly to moderately expansive. Traces of oil in the upper native soil can be found due to petroleum production operations in this section. Fill materials to 25 feet in depth are located in oil production areas.

Northern Section: Upper natural soils consist of silty clays and clayey silts. These soils are, in general, moderately expansive except in the eastern area, which is highly expansive.

### 3. Topography and Slope

The City of Signal Hill's topographic features are the surface expression of underlying geologic conditions and are one of many major factors in determining the suitability of land for development. Properties of very steep slope for example, may be unsuitable for intensive development unless extensive engineering is used to ensure structural stability.

The overall topography is the most predominant characteristic that gives Signal Hill its unique physical form (Figure 2, Geologic Hazards of the Safety Element). In this City of approximately 2.25 square miles, slopes vary from 10 to 80 percent. Slopes are steepest surrounding the Hill. This feature is one of a series of anticlinal or upfaulted hills that formed along the Newport-Inglewood Fault Zone (refer to

Figure 2, Safety Element). In the southwest portion of the City, the boundary elevation is 25 feet above sea level and terminates at the hilltop plateau at an elevation of 370 feet above sea level. The greatest percentage of slope change occurs on the southerly slopes of the Hill with an average of 40 percent slope and increasing in some areas to as much as 80 percent slope. In the adjacent areas of the City, the slope change is more gradual, in most cases only 5 to 10 percent.

Major portions of the Hill do not consist of uniform slopes. In most cases, roads and pads have been cut to facilitate road access to service the oil equipment and development. The cuts create steep slopes that terminate in a flat terrace shape. This condition occurs on many of the Hill's major slopes; for example, those extending from the southwest, at the intersection of 21st Street and Cherry Avenue, along the western and northern faces, and terminating in the northeast, near Hathaway Street. Therefore, the Hill's slopes, as illustrated on the slope map, are somewhat misleading; in reality, portions of the land that have been cut for roadways and other development create steeper slopes than the overall topography depicts.

#### **4. Petroleum Resources**

The City of Signal Hill's history has been tied to oil production. The Long Beach Oil Field was discovered with the completion of "Alamitos No. 1" by Shell Oil Company in March 1921. This first well was located at the corner of Temple Avenue and Hill Street in what is now Signal Hill. The discovery spawned the speculative oil development of the area, setting the stage for what resulted in one of the largest historical oil fields in the state. Trapped mainly against the Cherry Hill Fault are some of the world's thickest oil-saturated sand beds, collectively known as the Long Beach Oil Field. The oil field, over 4 miles long and 1 mile wide, is located primarily within the City of Signal Hill; it also extends into the City of Long Beach. Six oil-producing zones are recognized in the field: (1) Upper Wilbur Zone; (2) Lower Wilbur Zone; (3) Alamitos Zone; (4) Brown Zone; (5) Deep Zone; (6) DeSoto Zone (also see the preceding soils section).

As of January 1984, the cumulative production from the Long Beach Oil Field, largely centered in Signal Hill, has been over one billion barrels of crude petroleum, making it one of the largest fields in the state. The field covers approximately 1,205 productive acres, and recovery-per-acre was at one time the highest in the world.

Over 2,400 oil wells have been drilled in the field, of which approximately 600 active producing wells currently remain within the City of Signal Hill. These Signal Hill wells produced approximately 2,575,000 barrels of oil in 1982, an average daily production per well of approximately 12 barrels. Signal Hill's production represented approximately 76 percent of the total 1982 production in the Long Beach Oil Field (3,400,000 barrels), with a dollar value approaching 65 million dollars.

Due to title ownership problems, diverse and splintered ownerships, and the size of the oil field, three major oil companies with the largest operating interests in the Long Beach Field, (Shell Oil, Texaco, and Atlantic-Richfield) decided each would take a portion of the field for unitization purposes. Unitization occurs when each oil company and royalty owner having mineral and/or surface interests in an area sign a unit agreement with the interests of other owners in the area to further oil production through development of secondary recovery facilities.

Secondary recovery is a general term used to describe the method of production adopted to replenish the original energy when this natural method of production is no longer sufficient to produce the oil. "Waterflooding," a secondary recovery method, is used in Signal Hill. The waterflooding technique enables heavy oils, otherwise difficult to extract from the earth, to be pumped more quickly and economically from the field. The secondary recovery program is thought to be the most economical and ecologically sound method of continuing oil production in Signal Hill. The program represents the first attempt to control production logically in a field that has otherwise been characterized by a multiplicity of operators, an irregular development pattern, and wasteful land utilization.

Through this unitization effort, it is estimated that an additional 70 million barrels of oil will be produced in Signal Hill. This is in excess of the 30 million barrels that would have been produced under primary production. In addition to significantly increasing the ultimate recovery of oil in Signal Hill, the waterflood project has resulted in more efficient production; many abandonments have occurred and a significant release of surface rights has resulted in favor of orderly development.

As the secondary recovery program proceeds, land will gradually be released for urban development. The presence of extensive oil resources in Signal Hill is an important local land use planning consideration. As shown in Figure 2, approximately

one-third of the city is still vacant, in oil production or being held for oil production. As a result, the City will continue to be faced with problems of planning for competitive land uses. As pressures for development in Signal Hill continue, the City will need to preserve surface access to oil resources while still encouraging development. At the same time, careful planning will be necessary to mitigate impacts resulting from a close interface between urban development and oil production.

## **5. Development Suitability**

Development suitability describes the degree of safety with which land can support urban structures. Principal determinants of development suitability include: (1) ultimate use, (2) slope, (3) soil composition, (4) significant landforms, (5) view potential and (6) mineral resources. Slope, soil composition and landforms are the most critical of all of the suitability criteria, since they can severely restrict or completely eliminate the possibility of urban development, depending upon their severity. The last two criteria are, in fact, matters of policy and are not physically restrictive to development.

Slopes over 20 percent are not generally considered suitable for urban development. In addition, highly expansive or compressible soils and land with significant rock outcroppings or other landforms are not suitable for development. Moreover, Signal Hill has significant view potential that can only be protected through the careful placement of structures. Lastly, the City has unique oil resources that may constitute a precedent for properties to be developed with oil-related facilities, rather than other urban development types. Development suitability in Signal Hill, then, considers both physical development restrictions and policy direction.

## **D. Biological Resources**

The City of Signal Hill is located approximately 2.5 miles from Long Beach Harbor. The topography of the area provides the City with a direct coastal influence, producing an environment of mild temperatures and moderate humidity. The favorable climate historically support a diverse flora and fauna.

## **1. Plant Life**

Prior to development of the area, the dominant plant community was coastal sage scrub. This is a low, open shrub and subshrub plant community typically found on slopes subject to coastal influences. Remnants of coastal sage scrub can be found in the brushy, open areas adjacent to existing oil wells within the city limits. Typical coastal sage species, all of which are relatively uncommon in the area, include California sage brush (Artemesia californica), Spanish bayonet (Yucca whipplei), laurel sumac (Malosma laurina), slender tarweed (Hemizonia ramosissima) and prickly pear (Opuntia sp.).

The coastal sage scrub community of Signal Hill has been largely converted through brush-clearing to a ruderal community. Ruderals are plant species that have the ability to rapidly colonize disturbed areas where such environmental extremes as very loose substrates or compacted soils, high temperatures, intense light and low moisture predominate. They are usually rapidly growing species that flower and set seed within a short time, when conditions are favorable. Ruderals may be native plants (many wildflowers are ruderals) or, more commonly, introduced weedy species. Ruderal species in the Signal Hill area include common, nonnative weedy species, such as Russian Thistle (Salsola iberica), broad-lobed filaree (Erodium botrys), common wild oat (Avena fatua), short-podded mustard (Brassica geniculata) and bur-clover (Medicago polymorpha).

In addition, a number of ornamental species have been planted throughout the City. Common species utilized include juniper (Juniperus sp.), eucalyptus (Eucalyptus sp.), Peruvian pepper trees (Schinus molle) and various species of palms.

No species of plant currently designated rare, threatened or endangered by the U.S. Fish and Wildlife Service, California Department of Fish and Game or California Native Plant Society has been located or is expected to occur within the City.

## **2. Wildlife**

Due to the degraded nature of the available habitat within the City of Signal Hill, most animals are expected to be common, widespread and highly adaptable species.

The Pacific slender salamander (Batrachoseps pacificus) is an amphibian expected in

the vicinity of irrigated landscaping. Expected reptiles include the western fence lizard (Sceloporus occidentalis), side-blotched lizard (Uta stansburiana) and southern alligator lizard (Gerrhonotus multicarinatus).

Birds, being highly mobile, are the most numerous vertebrates in the area. Species tolerant of human presence, such as the mourning dove (Zenaida macroura), northern mockingbird (Mimus polyglottus) and house finch (Carpodacus mexicanus) are expected to be common.

Mammals tolerant of human presence and able to utilize a disturbed habitat include the Virginia opossum (Didelphis virginiana), black-tailed jack rabbit (Lepus californicus), desert cottontail (Sylvilagus audubonii), California ground squirrel (Spermophilus beecheyi) and species of rodents commonly considered pests, such as black rat (Rattus rattus), Norway rat (Rattus norvegicus) and house mouse (Mus musculus).

No species of wildlife currently designated rare, threatened or endangered by the U.S. Fish and Wildlife Service or the California Department of Fish and Game has been located or is expected to occur within the City of Signal Hill.

#### E. Historic Resources

The historical resources in Signal Hill include oil development and historical structures. The remaining oil development in Signal Hill is a present-day reminder of the City's past. It was the discovery of oil in June 1921 that gave the City its financial resources to incorporate and develop to the extent that it has today. Remaining derricks and towers are a living reminder of these past events. The Alamitos #1 Discovery Well, located at the northeast corner of Hill Street and Temple Avenue is designated as a state historical monument. Figure 3, Cultural, Aesthetic and Recreational Resources shows its location.

In addition to the remaining oil activity, Signal Hill has a number of structures with potential historical value that exhibit a variety of architectural styles. In January 1985, Signal Hill commissioned a survey of historic structures in the city.<sup>1</sup> The study

notes that approximately 10 architectural styles can be identified in the city, including Greek Revival, Colonial Revival, Transitional, Craftsman, Cottages/Bungalows, Spanish Colonial Revival, Period Revival, Neoclassical, Vernacular and Moderne. Sixteen of the most important are shown on Figure 3. An additional 47 buildings were identified as being of secondary importance. Buildings in both categories could, if restored, be potential candidates for the National Register of Historic Places. A total of 309 historically distinctive structures was identified.

The first seven architectural styles identified above are characteristic of residential structures with Neoclassical, Vernacular and Moderne typified in commercial/industrial structures. These structures date back from 1870 for those of Greek Revival style, to 1940 for those of Cottages/Bungalows, Spanish Revival and Period Revival. Most structures have undergone alteration, rehabilitation, and to some extent, modernization. A number of buildings remain primarily in their original state. Preservation of historical resources in Signal Hill can enhance community identity and contribute to the character already established in the city.

#### **F. Cultural, Aesthetic and Recreational Resources**

In order to plan logically for the preservation, conservation, and rational utilization of open space, knowledge of the existing open space resources of the community is necessary. The areas of open space uses recognized in the City of Signal Hill are landscaped medians, parks, school playgrounds and special function areas, as described below.

##### **1. Landscaped Street Medians and Parkways**

Landscaped medians and parkways, although they cannot provide usable open space for community residents, can significantly enhance the aesthetic appearance of highways and major roadways and, at the same time, improve the flow of traffic. Landscaping also helps to increase community identity and can distinguish Signal Hill from the surrounding area. Identification monuments, entrance fountains, distinctive street trees and unique landscape treatment can all be included in medians and parkways to achieve distinctive community character and aesthetic quality improvements.

Willow Street is currently the only roadway in Signal Hill that is developed with a landscaped center median. The median extends from the western to eastern City boundary and is landscaped with river rock, liquid amber and palm trees.

Parkway plantings and street trees are provided as part of the City's continuing street improvement program. In addition, landscaping is required as part of the City's development review and permit process.

Criteria that may be utilized in determining potential future landscaped roadways (or portions thereof) include:

- Roadway significance in relation to general circulation pattern, as determined by roadway width, traffic volume, general plan designation or combination thereof.
- Proximity to major features; e.g., major commercial concentrations, unique landforms, view potential.

Under these criteria, other potential roadways for landscape consideration might include Cherry Avenue (south of I-405), Orange Avenue and Spring Street. Where right-of-way is not sufficient for full median and parkway landscaping, more compact design solutions might be possible.

## **2. City Parks and Recreational Facilities**

The City of Signal Hill enjoys a somewhat unique position among Southern California communities in that it remains relatively undeveloped as compared with adjacent areas, and it is completely surrounded by the fully developed City of Long Beach. In view of Signal Hill's relative location, recreational opportunities in nearby Long Beach cannot be ignored when determining needs for the City.

Many parks and other facilities in the City of Long Beach are closer and more convenient to Signal Hill residents than to other areas of Long Beach. It is anticipated that Long Beach parks and school playgrounds within one-half mile of the Signal Hill City limits may be used frequently by this community's residents. These facilities should, therefore, be included in planning for the recreation needs of the

City. In a similar manner, residents of Long Beach may be expected to utilize park facilities in Signal Hill, and these should also be considered as part of the recreational opportunities available to that City's residents.

The residents of Signal Hill will, of course, go beyond the immediate area in search of recreation. Excellent regional park facilities exist in the City of Long Beach, and Pacific Coast beaches are less than 20 blocks to the south of Signal Hill's southern boundary. At somewhat farther distances, a much wider range of recreational opportunities is also available.

As noted elsewhere in this plan, some of the land in the Hill area is very steeply sloping and subject to erosion; it may require extensive alteration in order to be utilized for urban development. Such areas are frequently better suited to open space and recreational uses. The City should, therefore, seek to protect actual or potential erosion areas on the Hill through the direct designation of permanent open spaces or through the utilization of strict development controls in these areas.

The City of Signal Hill has approximately 15 acres of developed and undeveloped park lands, as shown in Table 3 and Figure 3. Hinshaw Park, located at Cherry Avenue and 21st Street, is 10.07 acres, including City Hall and other public buildings. The active recreation facilities at Hinshaw Park include a softball diamond, a tot lot and a half basketball court. A fitness trail will also soon be installed. North End Park is located between Wardlow and 33rd Street and Brayton and Gundry. The park is approximately 2.78 acres and is at the same location as a water reservoir and related facilities, which total about 1.4 acres. North End Park provides for passive recreation (e.g., picnicking, relaxation) and has no facilities for active recreation. Wall Street Park, currently undeveloped, is located at Wall Street and Temple Avenue and encompasses approximately 0.54 acres. Legion Park, located at Hill Street and Legion Drive is 1.16 acres and is not fully developed. Approximately 0.35 acres of the site is used for a city parking lot and Chamber of Commerce headquarters.

**TABLE 3**  
**PARKS INVENTORY**

<u>Name</u>	<u>Location</u>	<u>Acreage</u>	<u>Existing Facilities</u>	<u>Planned Facilities</u>
Hinshaw Park	Cherry Avenue at 21st Street	10.07	Softball diamond, tot lot, half basketball court, City Hall, public buildings	Fitness trail
North End Park	Between Wardlow and 33rd, Brayton and Gundry	2.78	Water reservoir and related facilities, picnicking and passive recreation	
Wall Street Park	Wall Street and Temple Avenue	0.54		
Legion Park	Hill Street at Legion Drive	1.16	Parking lot, Chamber of Commerce HQ (partly developed)	
<b>TOTAL</b>		<b>14.55</b>		

In addition to the existing parks described above, Signal Hill is in the process of considering possible additional recreational facilities. A 1.4-acre site located at Dawson Avenue and Panorama Drive is being reviewed as a possible passive recreational site (e.g., picnicking, enjoying the view). Linear view areas within the public right-of-way will also be created along Panorama Drive.

The existing Signal Hill General Plan requires the provision of 4 acres designated as park or recreation space per 1,000 city population. Such acreage is to include both passive recreational areas/open spaces and active recreational park facilities. With a 1983 population of 6,973 persons, the City standard reveals a need for 27.8 acres of parkland, an increase of 13.3 acres. By the year 2000, this requirement will increase to approximately 40 acres, based on the City's projected population of 10,070.

Within one-half mile of the Signal Hill City limits are six sites designated and developed for recreational uses in the City of Long Beach. The largest of these

recreation areas is Chittick Field, an 18-acre facility owned by the Los Angeles County Flood Control District and leased by the City of Long Beach. The other facilities are five Long Beach City parks. The City of Signal Hill does not control the development or utilization of any of these park facilities; however, because of their close proximity to the City and their availability to Signal Hill residents, they have been, and will continue to be, important recreational resources for the community. This should be considered when recognizing the city's parkland deficiencies. School playgrounds discussed below, can also be utilized by residents through mutual agreements with the school district.

### **3. School Playgrounds**

Two public schools are located in Signal Hill and are under the jurisdiction of the Long Beach Unified School District. Signal Hill Elementary School has 7.39 acres available for recreational use during school hours. Burroughs Elementary School has 8.55 acres for recreational activity. The recreational facilities at both schools are also available for limited supervised public use only after school hours.

In addition to these schools, five other Long Beach public schools are within a short walking distance of Signal Hill. Altogether, they provide a total of approximately 18.82 acres of recreational open space land and playground facilities. They are located south and west of the City. Each has over 2.5 acres of available open space after school hours and each can be expected to continue to provide essential recreational facilities to area residents for the foreseeable future.

Long Beach City College, southwest of Signal Hill, also provides open space. It is adjacent to Chittick Field and together, these two facilities provide nearly 30 acres of open space that can be utilized by Long Beach and Signal Hill residents alike. A summary of recreational facilities available at the schools is given in Table 4.

**TABLE 4**  
**SCHOOLGROUND RECREATIONAL ACREAGE**

<u>Schools in Signal Hill</u>	<u>Recreational Acreage</u>	<u>Recreational Facilities</u>
Signal Hill Elementary	7.39	Playground and Grass
Burroughs Elementary	8.55	Playground and Grass
<u>Schools 1/2 mile from City of Long Beach/Signal Hill Boundary</u>		
Lee Elementary	2.87	Playground
Whittier Elementary	5.28	Playground
Burnett Elementary	2.69	Playground
College Intermediate	3.24	Playground and Grass
Nightingale	4.74	Playground and Grass
<u>Other</u>		
Long Beach City College	11.70	Gymnasium, Soccer Field, Tennis Courts
Chittick Field	<u>18.28</u>	Baseball Diamonds
<b>Total</b>	<b>64.74</b>	

#### 4. Special Function Open Space and Recreational Areas

Landscaped buffers provided between incompatible land uses, and along City or property boundaries, can also provide visual relief and aesthetic character to the Signal Hill community. For example, a portion of the San Diego Freeway passes through Signal Hill. The freeway is depressed as it passes through the city and is landscaped on either side. Although the open space is not usable for recreational purposes, the landscaping along the freeway helps buffer adjacent uses from the dust generated by freeway traffic. At the same time, it provides aesthetically attractive views for freeway motorists.

In addition, unique surface geology offers the potential for permanent open space uses. The Signal Hill uplift is a portion of the Inglewood-Newport fault system. This system is seismically active and numerous earthquakes have been recorded along its trend. The on-shore fault surfaces show topographic expression above ground in the City and elsewhere along the system.

Although preservation of open space is often used to minimize development in geologically hazardous areas, movements along the basement surfaces will not necessarily generate an equivalent movement on the ground. Therefore, open space planning that is used as a device for limiting development in areas subject to geologic hazard must be tempered by the realization that there is no assurance that seismic damage will be more severe along the surface expression of the fault system than anywhere else in the City. In the event of a strong earthquake not located in the immediate vicinity, the Signal Hill uplift might, in fact, represent a fairly stable location, as the uplift represents a relatively steady building area with respect to surface soils.

Nonetheless, structures located along the fault system might be in danger if movement occurs in the immediate vicinity. Open space designations on such hazard areas can minimize risk associated with earthquake activity in the immediate area, while providing such lands for recreational use and aesthetic value. Future development proposals should, therefore, be reviewed carefully with respect to seismic hazard toward the end that rational use be made of areas in the immediate vicinity of the fault zone. The Safety Element provides further information, maps and development recommendations with respect to seismic hazards in the community.

#### G. Other Open Space Resources

Signal Hill has other open space resources, including undeveloped land, privately owned open space, open spaces adjacent to the City and recreational travel resources, as described below.

##### 1. Privately Owned Land and Vacant Lands

**Undeveloped Land:** Over 30% of the land in Signal Hill, or 416 acres, is presently vacant or being used for surface oil production. The location and extent of such lands is shown graphically in Figure 2. Approximately 45 percent of this undeveloped land has been zoned for residential uses, whereas 31 percent has been zoned for commercial use and 26 percent has been designated for industrial uses. As the City continues to develop, open space areas are required to provide visual relief from urban development and recreational facilities for future residents of the City. These

portions of land currently undeveloped offer perhaps the greatest potential for future open space and recreational opportunities in the City.

**Military Academy:** The Southern California Military Academy is located at the southwest corner of Cherry Street and 21st Street and contains 6.26 acres. The Academy, which provides 2.06 acres of open space, is expected to continue at its present location. While the school is privately owned, the Academy has made its recreational facilities available during summer months to the City recreation program. The conservation of this open space is necessary so that visual relief from urbanization within the City can be maintained.

**Signal Petroleum Company:** The Signal Petroleum Company has recently purchased land along Cherry Avenue, south of Burnett Street, from the Shell Oil Company. The Shell Oil Company, in cooperation with the City, maintained a landscaped open space area along a portion of Cherry Avenue to provide visual relief and an attractive open appearance for motorists. The greenbelt, which consists of 4.40 acres, provides a buffer for adjacent residential development from traffic noise generated on Cherry Avenue. Because of slope conditions, some portion can be expected to continue to provide visual relief along Cherry Avenue.

**Sunnyside Cemetery:** The Sunnyside Cemetery is located at the northeast corner of California Avenue and Willow Street and constitutes approximately 13.92 acres. It is a privately owned facility located adjacent to Signal Hill, within the City of Long Beach. The City of Long Beach has designated the site as a permanent open use area.

**Long Beach Cemetery:** The Long Beach Cemetery encompasses approximately 4.41 acres, and it is located adjacent to the Sunnyside Cemetery. The cemetery is located in, and owned and operated by, the City of Long Beach. Similar to Sunnyside Cemetery, it is designated as a permanent open use area.

**Long Beach Airport:** The Long Beach Airport is located directly northeast of the City of Signal Hill in the City of Long Beach. The airport encompasses approximately 1,133 acres and provides a major open space area. The facility provides visual and spatial relief from the urbanization that surrounds it. In addition, the airport supplies recreational flying opportunities to the public. The airport

operations produce noise and air pollution that negatively affect the environment. The facility is expected to continue in existence and is designated as an open space area in the Long Beach Open Space Element.

## **2. Public Rights-of-Way and Other Open Space**

**Bicycle Pathways:** The principal discussion of bicycle pathways appears in the Circulation Element. There are significant issues regarding locations, grades, traffic conflicts and origins and destinations of bike riders that need to be resolved through detailed analysis and planning.

Existing City policy includes bicycle pathways as part of the Town Center and Hilltop Specific Plans and a route traversing the city from the intersection of Walnut and the Pacific Electric right-of-way northeasterly to the Temple Avenue interchange with the San Diego Freeway. In addition, the City of Long Beach has proposed several bicycle pathways that would cross Signal Hill: one at Willow Street, and the other along California Avenue. A coordinated and focused effort will be required to reexamine future City policy on this matter.

**Scenic Routes:** Signal Hill has designated a roadway, which surrounds the Hill area, as a scenic route. The roadway includes Panorama Drive, 23rd Street, 21st Street and portions of Temple Avenue (See Figure 3). This route uses the existing street system and provides a link between the Civic Center/Hinshaw Park and the State Historical Monument, which is located on the east side of the Hill at Temple and Hill streets. The entire route provides attractive views of urban Southern California from the Hill.

## **H. Alternative Energy Resources**

The use of solar energy for heating and cooling has increased rapidly throughout California due to rising energy costs. Some residents of Signal Hill have taken advantage of this alternative form of energy; however, they represent only a small percentage of the city's total population. The City has good solar access and has the potential to increase solar energy utilization in the future. In addition, the City's undeveloped land (approximately 350 acres) has very good potential for applying solar designs and technologies, including "passive solar" techniques, where collected heat

moves by the natural forces of convection, conduction and radiation, or "active solar," which involves the use of pumps and fans to transport heat. The solar energy potential of residential neighborhoods in Signal Hill is given in Figure 4. Industrial and commercial areas, though not addressed in Figure 4, have potential to use solar energy for space and water heating. Criteria used in determining solar potential include topography, development density and vegetation as described below.

**Type 1 Solar Potential:** These areas are designated as low-density residential on the General Plan, and large portions are undeveloped. Due to the undeveloped nature of these districts, there is good potential to incorporate solar access into future development designs, or through retrofit of existing development.

**Type 2 Solar Potential:** This area, designated medium-density residential, is currently being developed and has excellent year-round solar access. When this area is developed further, consideration of solar access in structural designs need to be implemented for continued solar access.

**Type 3 Solar Potential:** Much of the land in this area is indicated low-density residential and portions are currently being developed. Solar access is good for individual retrofit collectors on rooftops. In addition, this area has excellent potential for passive space heating designs and solar collectors due to the existing long lots.

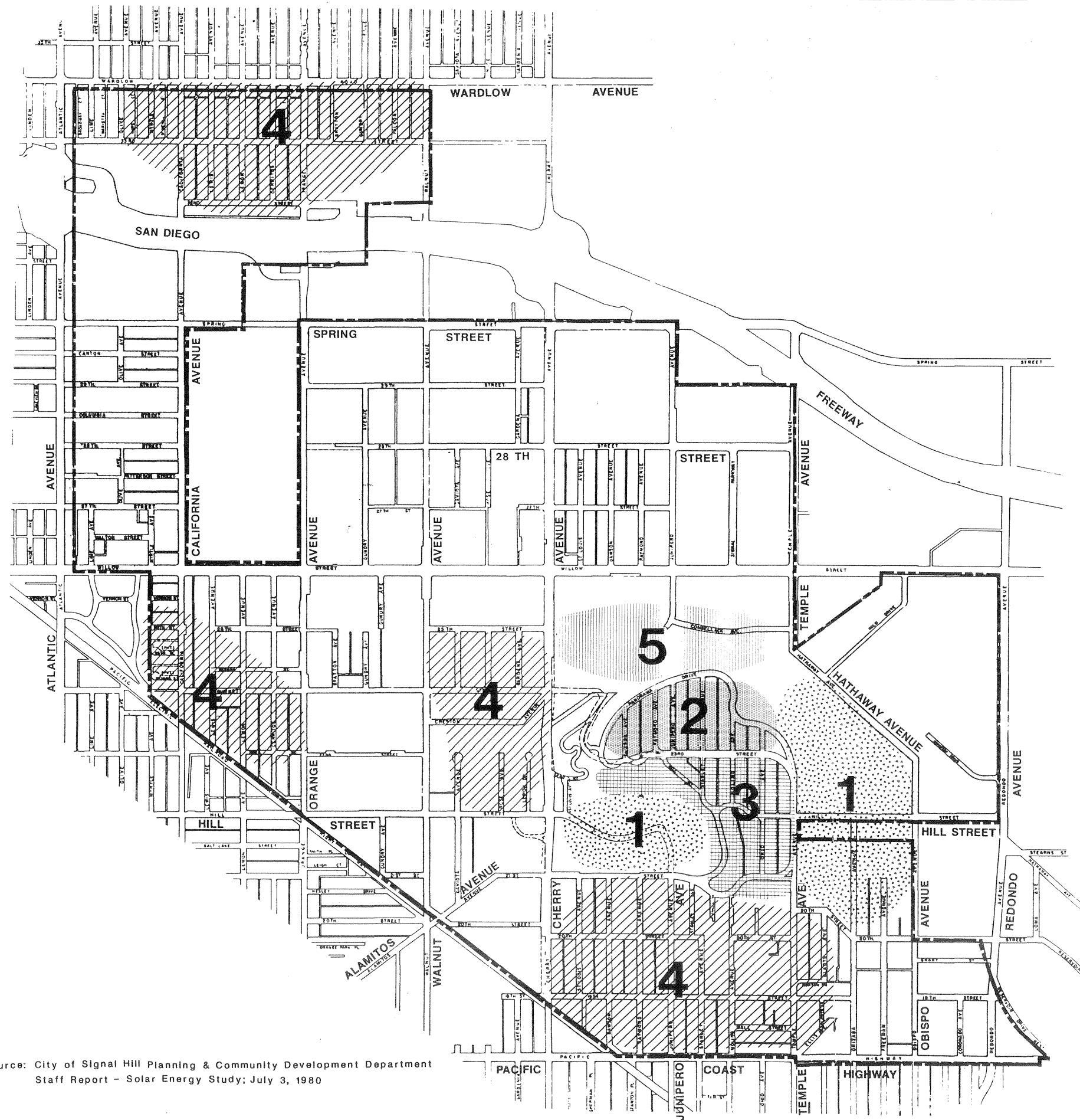
**Type 4 Solar Potential:** Land use in these neighborhoods consist of low/medium-density and high-density residential designations. Most of the land is developed and these areas are generally poor sites for passive solar systems due to the narrow lots and limited space between structures. However, these sites can take advantage of solar access with roof-mounted retrofit collectors.

**Type 5 Solar Potential:** Currently, this area is undeveloped. This area contains slopes of more than 15 percent, causing solar access to be poor. A major potential problem for solar systems in this area is long shadows that would shade the sun's incoming rays.<sup>1</sup>

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<sup>1</sup> The description of solar energy and potential use in Signal Hill was derived from the City of Signal Hill Staff Report, dated July 3, 1980.

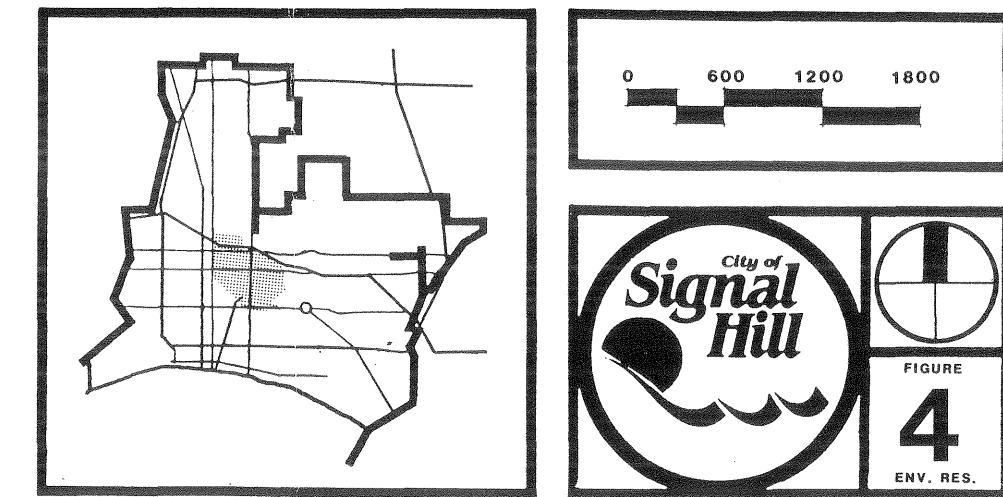
## SOLAR POTENTIAL



Source: City of Signal Hill Planning & Community Development Department  
Staff Report - Solar Energy Study; July 3, 1980

### LEGEND

- Type 1 Solar Potential:** designated low-density residential; largely undeveloped area; future and retrofit solar potential is high.
- Type 2 Solar Potential:** designated medium-density residential; currently being developed; excellent year round solar access.
- Type 3 Solar Potential:** area is low-density residential; portions currently under development; solar retrofit potential is good.
- Type 4 Solar Potential:** mixed density residential designations; most land developed; generally limited to poor solar potential.
- Type 5 Solar Potential:** designated as town center; undeveloped; poor solar access.



### **III. NEEDS, ISSUES AND CONSTRAINTS**

#### **A. Introduction**

Section II of this element describes existing conditions related to air quality, water and land resources, biologic environment, open space and recreation and the historical resources of Signal Hill. To provide a policy guide for the future, these existing conditions must be compared with community needs. In this section, needs are identified through a combined effort of the City and the public.

Once needs and issues are identified, the City must examine constraints to meeting those needs. Sometimes constraints are physical, such as slope or existing structures, and sometimes they are policy-oriented, such as means of financing, or priority relative to other development. The needs, issues and constraints for Signal Hill related to environmental resources are discussed below.

#### **B. Needs and Issues**

The following needs and issues have been identified through an analysis of existing conditions, and by the public at workshops held in December 1984 and August 1985.

- **Improve Air Quality**

State and federal air quality standards are exceeded infrequently in Signal Hill. The city's unique topography makes views important. Therefore, visual clarity is an important consideration in planning. Additionally, dust and particulate matter resulting from industrial and construction activity is a subject of continued monitoring. Moreover, regional air quality that is not static and that is subject to changes with the regional economy and development patterns is the responsibility of other agencies.

- **Protect Water Quality and Conserve Water Supply**

Water quality in Signal Hill is high, both for imported water and for that pumped directly from the underground basin. A major responsibility of the City is to reduce and/or eliminate contamination of the groundwater

supply. Responsibility for quality and supply is with others, as well; advocacy and collaboration will be required.

- **Preserve and Enhance Unique Natural Features and Protect Public Health and Safety**

The Hill provides Signal Hill with its most important identifying feature. Significant potential exists to enhance the City's living environment and overall image through creative and sensitive treatment of this major topographic feature. There are also additional opportunities for views noted on the Cultural, Aesthetics and Recreational Resources Map (Figure 3). Notably, views of the Hill are as important as views from the Hill. These same natural features can be used to protect the public health and safety in areas of severe slope, poor soil conditions or geologic hazard.

- **Manage the Development and Production of Petroleum Resources**

There are two issues related to the development and production of petroleum resources. One issue involves balancing the need to extract these valuable mineral resources in a way that minimizes hazards, softens the impact of production activities on surrounding properties, and does not inhibit economic development of other sectors of the City. A second issue involves the transition from resource production to urban uses, which is treated as well in the Land Use Element.

- **Protect and Enhance Historic and Architectural Resources**

Signal Hill has a wide range of architecturally significant buildings. As many as 63 of these potentially could qualify for inclusion on the National Register of Historic Places, if properly registered and/or restored. A significant historic resource is the first oil well in the city, Alamitos Discovery Well, a State Historic Landmark. These could be the foundation for a renewed interest in the City's history.

- **Provide Open Space and Landscaped Improvements for Visual Relief**

As a component in the aesthetic appearance of Signal Hill, the visual presentation along the City's highways is basic. The City's first median landscaping project on Willow Street sets the tone for developing an overall system that is integrated with other public facilities, parks, parkways and other possible highway improvements.

Unbuildable slopes and land that is left open because of geological/seismic considerations should also be integrated, whenever possible, into the overall system. This private element of the greenbelt system would be designed to relate visually to public facilities while taking care to respect the private nature of that space.

- **Provide for Adequate Outdoor Recreation Areas**

To meet current and future city standards for recreation additional land should be made available. In addition, currently undeveloped parkland should be improved. Significant recreational resources exist in and adjacent to Signal Hill; coordination of these facilities will create an overall system available to all residents.

- **Promote Conservation of Energy and Use of Alternative Energy Resources**

Signal Hill residents have opportunities to benefit from the Southern California climate by exploiting solar energy. Although the utility and potential of this resource is not typically available to the average homeowner, there is a clear need to encourage the use of this energy source.

### C. Constraints

As part of the planning process, the identification of barriers or constraints to city action is necessary. This is not so much a listing of what is impossible, but a challenge to think creatively about how to surmount the barrier. There are always constraints that relate to resource availability. Most often, these have to do with

funding; less frequently, they relate to the availability of resources such as expertise and leadership. The following constraints have been identified for the Environmental Resources Element:

- **Regional Problems and Jurisdictional Responsibilities**

Signal Hill is a relatively small city of just over 7,000 people in a county that has over 7 million people and many regional regulatory agencies. Signal Hill cannot always take direct action to solve certain problems; the city's ability to mitigate the impacts on its residents is limited. For some issues, such as air quality, the SCAQMD is the lead agency. Los Angeles County, because of its size, and geographic importance, has prepared its own policy statement. To some extent, water quality is a similar regional problem.

- **Limitations and Costs of Known Technology**

This constraint is a scientific and engineering one, and like the jurisdictional question, is not unique to Signal Hill. Given, for instance, the Southern Californian's dependence on the automobile, and current technology available to curtail automotive emissions, elimination of air pollution resulting from this source is unlikely in the foreseeable future. Similarly, methodologies for recovering, storing, and transporting petroleum resources have a cost/technology relationship that can act as a constraint. Although this type of constraint is one that Signal Hill can do little about, some actions are available to the City. These include keeping current with technologies and costs in key areas of concern, such as petroleum resource recovery and designing development standards to recognize technological advances and limitations, among other actions.

- **Rights Attendant on Private Ownership of Property**

This constraint on government is a fundamental one. It most often comes into focus in areas of property maintenance, use and reuse of historic and architecturally significant buildings, and in development standards applied to new construction. With respect to environmental resources in Signal

Hill, it comes into play in the rights to develop property that might be needed to achieve open space goals, in recovering petroleum resources that might cause environmental degradation, or in proposed use or remodeling of architecturally significant structures. The solution lies in the City's ability to set guidelines that can optimize competing goals.

- **Fiscal Limitations**

Although not unique to environmental and open space resource conservation, fiscal constraints exist at every level of government. Signal Hill is no exception. Land acquisition for parks and open space purposes, development of recreation facilities, landscaping of medians and parkways and similar expenditures must compete for limited City dollars. To the extent possible, reliable alternate funding sources should be developed.

- **Level of Public Knowledge and Information**

On many issues, the public is poorly informed. This lack of information often translates into lack of support for worthwhile proposals and programs. This may be the case, for instance, with energy and water conservation: a short-term experience with "plenty" sets the tone for response to conservation programs. All government programs should include public education components that clearly state the known facts and presumptions upon which action to the public is recommended.

#### **IV. GOALS AND POLICIES**

Signal Hill's environmental resources, goals and policies have been developed to respond to community needs and recognize constraints as discussed in the preceding section of this element. Goals are defined as desirable long-range conditions that the city will strive to reach. Policies are statements of direction for the City to achieve those goals. Together, they provide the city with a guiding framework to define implementation strategies.

## **GOAL 1**

**Maintain and enhance the identity and aesthetic quality of Signal Hill as a City with striking view potential, and a City that is carefully managing its transition from resource extraction to balanced land uses.**

### **POLICY 1.1**

Protect views both to and from the Hill and other scenic features. This will extend to all new development, and to major rebuilding and additions.

### **POLICY 1.2**

Design a greenbelt system that includes landscaped entranceways to the city, and landscaped medians and parkways on City streets. The greenbelt system should be linked to the civic center as a community focal point, the City's park system, bicycle and pedestrian trail system, active and passive open space, with consideration given to developing guidelines to integrate the system with private open space.

### **POLICY 1.3**

Develop design guidelines and themes that can be utilized throughout the City, and that are integrated with the greenbelt system, public signage, street furniture, public buildings, and similar facilities.

### **POLICY 1.4**

Protect and enhance the natural topography that exists in the City.

## **GOAL 2**

**Maintain and enhance the City's unique cultural, aesthetic and historic areas.**

### **POLICY 2.1**

Protect and enhance the State Historical Landmark at the Alamitos Well Site #1.

### **POLICY 2.2**

Protect and enhance architectural resources in the City consistent with their significance and importance. Develop ways of encouraging these resources to remain intact as the City grows and develops.

## **GOAL 3**

**Provide and maintain a variety of parks and recreational facilities, both passive and active, that will be conveniently located throughout the community.**

### **POLICY 3.1**

Provide parkland and recreational facilities in neighborhoods of the City currently not served with such facilities.

### **POLICY 3.2**

Ensure accessibility of local and regional parklands of all types to all users, including the young, the elderly and the handicapped.

### **POLICY 3.3**

Provide (within economic capabilities) as full a range of activities as possible, including active and passive recreation, biking, walking, jogging, picnicing and "viewing."

### **POLICY 3.4**

Coordinate with the Long Beach Unified School District to ensure the availability of school recreational facilities for public recreation after school hours.

### **POLICY 3.5**

Coordinate with the Long Beach Parks and Recreation Department on park and recreation planning to ensure that all users of these facilities in both cities are well served.

## **GOAL 4**

**Manage the production of economically valuable resources in the city to achieve a balance between current market forces and long-term community values.**

### **POLICY 4.1**

Improve the interface between oil production activities and urban development, both for existing and new projects.

### **POLICY 4.2**

Encourage the development and production of natural resources that are demanded by the market, and that release land for urban uses at a reasonable and controlled rate.

### **POLICY 4.3**

Require the restoration and reuse of land no longer necessary or economical for oil-production activities.

### **POLICY 4.4**

Minimize and eliminate where feasible the adverse environmental impact of resource-production activities. Also provide adequate setback and open space where oil-production activities continue adjacent to urban development.

## **GOAL 5**

**Ensure minimal degradation to the physical environment from development or operational activities, and require restoration of the environment where degradation has occurred.**

### **POLICY 5.1**

Cooperate and participate in regional air quality management plans, programs and enforcement measures.

### **POLICY 5.2**

Protect water quality and conserve water supplies through reducing and eliminating contamination from industrial operations or resource development activities. Cooperate and participate in regional water quality and water supply plans, programs and implementation measures.

### **POLICY 5.3**

Eliminate the unsafe storage, use and transport of hazardous industrial and commercial chemicals and substances through regulation, planning and development review processes.

### **POLICY 5.4**

Reduce and eventually eliminate current environmental degradation in all areas of the city. Require restoration of the environment in these areas where it is subsequently degraded.

## **GOAL 6**

**Ensure and protect the public safety in natural hazard areas.**

### **POLICY 6.1**

Regulate development to protect the public health, safety and general welfare where studies indicate hazards due to earthquake faults, unstable soils or steep slopes. Where needed, maintain such lands in public or private open space uses. Restrict the proximity of buildings to existing oil production uses or petroleum storage facilities that present a high risk of explosion or fire.

## **GOAL 7**

**Maintain and provide information to the community on environmental problems, opportunities, progress and issues.**

### **POLICY 7.1**

Disseminate information about the values of alternative energy technology, including use of solar energy in Signal Hill.

### **POLICY 7.2**

Develop a public information program in conjunction with the oil production industry to explain programs and progress toward improving the resource production/urban development interface.

### **POLICY 7.3**

Provide information to the general public on environmental conditions and issues in Signal Hill.

## V. IMPLEMENTATION - STRATEGY AND PROGRAM

The following programs are action statements to implement the framework established in the goals and policies. Programs, generally, are the most definitive means for accomplishing community needs since they are, where possible, quantitative guides for the management of environmental resources in the City.

<u>Implementation Program</u>	<u>Corresponding Policy</u>
1. Review and revise the current zoning ordinance to provide protection to areas of greatest view sensitivity, and to encourage preservation of the natural terrain through mechanisms such as reducing residential densities as recommended in the Land Use Element.	1.1, 1.4
2. Through the City's site plan and development review procedures, continue to evaluate individual projects to ensure protection of views and preservation of the natural topography wherever possible.	1.1, 1.4
3. In preparing capital improvement plans, the City will explicitly consider view protection and protection of natural resources.	1.1, 1.4
4. Prepare a comprehensive greenbelt plan. The plan will include landscape architectural designs for entranceways to the City, plant lists and landscape designs for medians and parkways, standards for landscaping requirements on private properties that front arterial highways or other significant public properties, and precise implementation measures. The plan will link public open space, private open space, historical and cultural resources.	1.2
5. Prepare overall design guidelines for the City specifying design, size, materials, colors, and similar elements that can be integrated with a greenbelt system, public signage, street furniture, public buildings and private improvements.	1.3
6. Explore mechanisms and available programs to protect and enhance the State Historical Landmark at the Alamitos Well Site #1. Cooperation of the State Historic Landmarks Commission and the oil industry will be sought. An effort will be made to develop a passive park to complement the site.	2.1

<u>Implementation Program</u>	<u>Corresponding Policy</u>
7. As funding is available, continue to expand upon the Historic Resources Study. Additional information about structures which might be collected includes oral histories of use and ownership, pictorial history of significant design and construction details, condition of structure and details of additions, craftsmen involved, important owners and/or residents and similar items.	2.2
8. Examine all "A" rated structures in the city's Historic Resources Study and review possible zoning mechanisms and funding sources to encourage the preservation and enhancement of these structures.	2.2
9. Continue to require dedication of park lands or in-lieu fees or a combination of both, from developers of new residential subdivisions and planned developments. Revenue received from these fees should be used for park acquisition and/or development within the area of the particular development they were collected from.	3.1
10. In acquiring and developing park lands, top priority should be given to Planning Areas 7 and 4.	3.1
11. Develop a program to remove architectural and other physical barriers to the use of City parks that reduce accessibility by the young, the elderly and the handicapped.	3.2
12. Prepare an open space zoning ordinance that designates public park lands and facilities as open space.	3.2
13. The City will seek to minimize City costs of acquiring and managing recreational and open space through techniques which may include easement acquisition, donations, etc.	3.1, 3.2, 3.3
14. As part of the annual budget process, including the review of public works as required by section 65401 of the State Planning Law, ensure that recreation opportunities are included as financial resources are available. Recommendations should consider the need for both active and passive recreation opportunities.	3.1, 3.2, 3.3
15. Develop a comprehensive plan for bicycle trails and pedestrian pathways in the City. This plan will connect major focal points in the City, including but not limited to the Hilltop, the Town Center and the Civic Center. The plan will explore the possibility of linking facilities outside of the city with those in the City, the usefulness of the Pacific Electric right-of-way, and linking City trails with those shown on the Long Beach General Plan.	3.3

<u>Implementation Program</u>	<u>Corresponding Policy</u>
16. Where feasible, and where consistent with adopted specific plans, the general plan and the zoning ordinance, the City will encourage facilities that capitalize on view potentials. Public facilities will include view parks, view points along bike trails and pedestrian pathways and roadside view points along scenic highways. Private view opportunities could include restaurants (as exemplified by the Hilltop specific plan) and other uses where numbers of people might congregate.	1.1, 3.3
17. The City will work toward establishing with the Long Beach Unified School District a written agreement for the recreational use of school facilities after hours.	3.4
18. The City will discuss with the City of Long Beach a possible mutual agreement for the purpose of ensuring the use and availability of recreational resources in Long Beach for Signal Hill residents.	3.5
19. The City will review all regulatory ordinances to define areas where the interface between oil production and urban uses is involved. Amendments will be proposed to improve the quality of this interface and minimize undesirable impacts.	4.1
20. Where hazardous or recurrent nuisance conditions exist, the city will work with property owners and occupants to resolve issues and mitigate impacts. This will include: (a) a survey and definition of such conditions, based on a field survey and a review of complaint and incident records, and (b) a review of relevant municipal code procedures and enforcement practices to determine desirable changes.	4.1
21. Maintain communication with oil extraction interests in the City regarding market trends and projections for continued pumping from Signal Hill oil fields. As trends and projections are refined, review City plans and policies for continued appropriateness, and amend plans, policies and implementation tools as necessary.	4.2
22. Periodically review and update operational and drilling standards for oil production. In collaboration with the oil industry, define criteria and standards for the restoration and reuse of land no longer necessary or economical for oil production activities.	4.1, 4.2, 4.3, 4.4, 5.3
23. Review carefully all zoning, building and discretionary permit applications which interface with oil production activities. As part of the approval and permit process, the City will require or encourage changes in project design, fencing, landscaping, etc., to minimize or eliminate undesirable impacts.	4.4

<u>Implementation Program</u>	<u>Corresponding Policy</u>
24. Coordinate with the South Coast Air Quality Management District (SCAQMD), the California Air Resources Board and applicable federal agencies to improve air quality throughout the South Coast Air Basin. Specifically, the City will coordinate with the SCAQMD to implement regional air quality attainment measures applicable to the City of Signal Hill.	5.1
25. Coordinate with appropriate regional and state agencies to promote the conservation of water and groundwater resources to ensure that continued adequate supplies of water will be available into the future, with the highest water quality available.	5.2
26. In collaboration with representatives of the oil industry, explore means of expediting cleanup from oil spills, chemical spills and other industrial accidents which may affect the environment. Review current response procedures and explore ways of allocating costs to the responsible parties.	5.2
27. Cooperate and participate in regional studies and investigations dealing with hazardous waste disposal. Implement programs that are clearly within the City's sphere of responsibility and fiscal ability, as appropriate.	5.2
28. Review current zoning, building, safety and other codes regulating storage, use and transport of hazardous chemicals on a regular basis, to ensure that they are responsive to technology in use, and available means of risk management. Amendments will be recommended as appropriate.	5.3
29. Through implementation of the Sanitary and Industrial Waste Ordinance, identify and abate hazards and nuisances resulting in unacceptable risk of contamination or personal safety.	5.3
30. During the permit and development review process, the presence or likelihood of hazardous chemicals and substances will be identified. If such do exist in any situation, permits will not be issued until adopted City ordinances standards and regulations have been complied with.	4.4, 5.3
31. As a condition of permit issuance, the City will require that property be cleaned of rubble, remnants of abandoned structures, and environmentally degraded portions of the site as required by existing City ordinances standards and regulations.	5.4

<u>Implementation Program</u>	<u>Corresponding Policy</u>
32. Implement applicable code enforcement procedures requiring remedial measures where the environment is substantially degraded, and there is a public health or safety threat. Where the degradation is not hazardous, but visual or of a nuisance character, utilize nuisance provisions in the municipal code to obtain corrections.	5.4
33. Existing codes and ordinances will be reviewed and revised as necessary to restrict building in areas of unstable or steep slopes.	6.1
34. The City will require that new developments respect natural landforms and minimize grading. Amendments will be made to appropriate codes and ordinances to encourage contouring, to require stabilization of cut and fill slopes and to require landscaping of slopes, where substantial grading is proposed.	1.4, 6.1
35. The City, through appropriate codes and ordinances, will provide adequate building setbacks from oil production and petroleum storage facilities with a high risk of explosion and fire.	6.2
36. The City will prepare a brochure and information program, in conjunction with local energy utility companies, which describes the costs and benefits of solar technology to Signal Hill residents.	7.1
37. In collaboration with the oil industry and the Chamber of Commerce, develop an educational program describing the interface between oil production and urban uses, and how it is expected to change over time. Material developed as part of this program will be distributed to existing and prospective businesses and residents in Signal Hill.	7.2
38. Periodically provide City newsletter information covering environmental issues and progress, for delivery to residents and businesses.	7.3

C I T Y   O F   S I G N A L   H I L L

# General Plan

SAFETY

ELEMENT

2016

*Prepared by the City of Signal Hill in collaboration with RGP Planning & Development Services (2010)  
Geologic and hazards mapping provided by Earth Consultants International*

## ACRONYMS & ABBREVIATIONS

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CAL FIRE	California Department of Forestry and Fire Protection
CERT	Community Emergency Response Team
CGC	California Government Code
CUPA	Certified Unified Program Agency
DMAC	Disaster Management Area Coordinator
DOGGR	Division of Oil, Gas, and Geothermal Resources
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
HMP	Hazard Mitigation Plan
LACoFD	Los Angeles County Fire Department
LACOEM	Los Angeles County Office of Emergency Management
LBGO	Long Beach Oil & Gas Department
NIMS	National Incident Management System
SCAQMD	South Coast Air Quality Management District
SEMS	Standardized Emergency Management System
SHMC	Signal Hill Municipal Code
SHPD	Signal Hill Police Department
SHPI	Signal Hill Petroleum, Inc.
URM	Unreinforced Masonry

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# I. INTRODUCTION

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## A. Purpose and Scope

The Safety Element is one of seven General Plan elements required by the State of California.<sup>1</sup> This document provides the City of Signal Hill with background information on hazards and public safety services, and establishes goals, policy direction, and implementation measures intended to limit the community's exposure to a range of hazards. This element is a comprehensive update of the 1986 Safety Element and incorporates the latest available information from local, state, and federal sources regarding public safety and hazards. This element includes:

- Existing conditions & background information on the City and existing police, fire, and medical services serving the City.
- A discussion of seismic and geologic hazards, including surface rupture and ground shaking resulting from earthquakes, liquefaction, landslides, and soil settlement and expansion.
- A discussion of oilfield hazards related to hazardous materials impacts, with a focus on identifying and minimizing risks associated with oil production, storage, and transportation activities.
- An evaluation of other hazards, including fires, flooding, tsunami, seiche, and dam failure, including evacuation routes.
- Goals, policies, and implementation measures that provide direction and guidance for the City of Signal Hill to minimize impacts resulting from hazards over the coming decades.

Like all General Plan elements, this Safety Element is intended to serve as a long-range planning document. The planning period for this document is through 2020.<sup>2</sup>

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<sup>1</sup> California Government Code Section 65302.

<sup>2</sup> California Government Code Section 65302(g)(5) Upon each revision of the housing element, the planning agency shall review and, if necessary, revise the safety element to identify new information that was not available during the previous revision of the safety element.

## B. Regulatory Framework

The State of California has mandated that each city and county prepare a Safety Element as part of its General Plan. Section 65302(g) of the California Government Code (CGC) requires that a Safety Element provide:

*[...] for the protection of the community from any unreasonable risks associated with the effects of seismically-induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards. [...]*

Section 65302(g)(2) of the CGC establishes additional requirements for safety elements revised in 2009 or later. These requirements provide for the inclusion of additional information and analysis of flood hazards. Section 65302(g)(3) of the CGC establishes additional requirements for safety elements revised in 2014 or later to address the risk of fire for land classified as very high fire hazard severity zones.

This 2016 Safety Element meets all state requirements described in the CGC and summarized above. As there are no military installations within Signal Hill, that topic will not be further discussed in this document.

## C. Relationship to Other Elements

General Plan elements provide important policy guidance to assist in decision-making. All of the elements of the General Plan are related and interdependent to some degree. However, the Safety Element is closely related to the Land Use, Housing, and Circulation Elements.

The objective of the Safety Element is to provide guidelines that minimize the impacts of potential hazards on humans and property. Where hazard areas are identified, the Land Use and Housing Elements provide guidelines and standards which establish appropriate development intensities and require enhanced analysis and mitigation of potential risks. Similarly, the Circulation Element's plans and policies take into account Safety Element recommendations to ensure fire department and other emergency access vehicles can access fire-prone areas.

## D. Element Organization

This element is organized into seven sections:

**Section I, Introduction** – a discussion of the purpose and scope, regulatory framework, and organization of this document.

**Section II, Background & Existing Conditions** – a discussion of the City's oilfield and public safety services in the area.

**Section III, Issues, and Constraints** – a discussion of known hazards in the area.

**Section IV, Goals and Policies** – goals and policies which will serve to minimize hazards impacts.

**Section V, Implementation Program** – a list of specific, practical action steps that, when implemented, achieve the goals and policies identified in Section III.

**Section VI, Resource Directory** – a list of state, federal, and private agencies and organizations which provide valuable information or input related to the topics covered in this document.

**Section VII, Mapping References** – a list of the references used in the preparation of geotechnical and geological maps included in this document.

**Appendix A** – the City's adopted Hazards Mitigation Plan

## **II. BACKGROUND & EXISTING CONDITIONS**

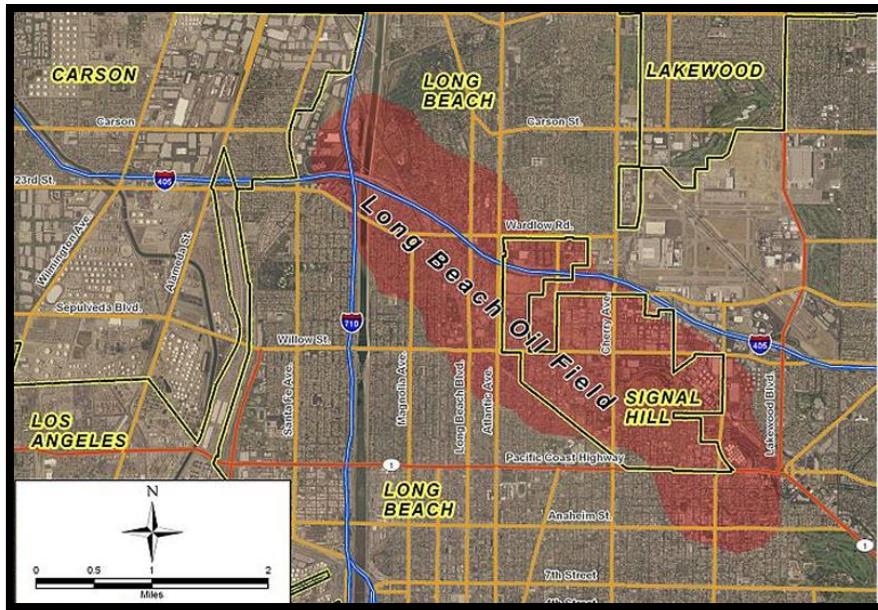
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### **A. City Profile**

The City of Signal Hill (“City”) is located centrally within the southwestern coastal area of Los Angeles County. It is the County’s 41st city, encompassing 2.25 square miles. The City of Signal Hill was incorporated as a general law city in 1924 and became a charter city in 2000. Signal Hill is located four miles west of the 605 Freeway, three miles east of the 710 Freeway and the 405 Freeway runs through the northern portion of the City. Although still a producing oilfield, the City is transitioning into a diverse, modern community and has active oil wells co-existing adjacent to modern commercial and residential development. Signal Hill is a growing community with an inventory of vacant land available for development. The City’s population has increased from 11,016 in 2010 to 11,673, according to 2016 State Department of Finance data. Housing data shows an increase in available housing from 4,389 to an estimated 4,531 between 2010 and 2016.

### **B. Oilfield**

Oil operations are not common to every City, therefore a discussion of the history of the oilfield, as well as a summary of oil production processes is included to provide general information about the oilfield (related hazards are discussed in more detail in Section III). Signal Hill is within the Long Beach Oilfield. Oil was discovered in 1921 in the Long Beach Oilfield with the completion of “Alamitos No. 1” by Shell Oil Company, located at the corner of Temple Avenue and Hill Street in what is now Discovery Well Park, the oilfield was originally estimated to hold approximately three billion barrels of oil. Approximately 2,900 wells have been drilled in the Long Beach Oilfield of which approximately 2,618 are within the City of Signal Hill. Of the wells in Signal Hill thousands were abandoned, while hundreds remain active and the field continues to produce both oil and gas.



Source: SHPI.net

The Long Beach Oilfield reached a peak production of 68 million barrels just two years after it was discovered, but continued robust production to meet wartime needs during World War II. Between 1945 and 1958, the field gradually became depressurized and another occurrence during that time was subsidence. As a result of oil extraction and reduced pressure in the Wilmington Oilfield (just south of the Long Beach Oilfield), parts of the City of Long Beach and Long Beach Harbor, sank by as much as one to two feet per year. There was less subsidence in Signal Hill and the Long Beach Oilfield. In 1959, both the federal and state governments stepped in to address subsidence and stop the collapse. It was discovered that water injection could be used to re-pressurize oilfields, to arrest and ultimately correct subsidence. However, for water injection to succeed, each oil and gas reservoir in the field would have to be operated as a unit. In 1958, the Subsidence Control Act was passed to regulate water injection and to utilize unitization agreements as a method to share the resource. The objective of unitization is to provide unified development and operation of an oil and gas reservoir so that exploration, drilling and production can proceed in the most efficient and economical manner.

Since the 1970s water injection has been utilized as a secondary recovery method and the Long Beach Oilfield continues to produce 1 million barrels of oil and 365 cubic feet of natural gas per year. The secondary recovery method, minimizes the risk of future subsidence resulting from oil extraction in the city and allows the mature field to remain an active producer. Signal Hill Petroleum, Inc. (SHPI) has been

operating in the City since 1984 and is the primary oil operator in the City, SHPI is a privately owned California based energy company.

As of June 2014, approximately 2,196 wells have been abandoned and/or re-abandoned and approximately 422 active oil or gas wells remain within the City (“active” wells include injection wells, production wells, and idle wells). As of October 2016, these active wells, 375 (over 88 percent) are owned and operated by SHPI and the remaining 47 are owned and operated by a range of 18 independent operators. As the City has developed into a commercial and residential environment oil and gas production has shifted from industrial to urban operations.

Oil and gas wells are regulated by both the State and the City. The State Department of Conservation, Division of Oil Gas and Geothermal Resources (DOGGR) regulates resource capture, production and abandonment activities and the City of Signal Hill, Community Development Department regulates land use activities over and in close proximity to wells. DOGGR maintains listings, well logs and maps of all active and inactive wells in the State.<sup>3</sup> The wells in Signal Hill are concentrated in a broad swath of land stretching from the northwest to the southeast. Oilfield operations have changed over time and as a result regulations continue to change in response to technological advances, understanding of geology, and refinement of best practices to protect public health and safety.

## Well Classifications

### *Active Wells*

Active and idle wells and equipment can be below grade, at grade and above grade throughout the City. Wells are found in a wide range of land use districts, and sometimes share parcels with non-oil-related land uses including residential uses. The Signal Hill Municipal Code (SHMC) prohibits the drilling of new wells in residential districts. Currently, a new well could only be drilled within one of Signal Hill Petroleum’s seven established Consolidated Drilling and Oil Production Sites under the conditions of their Conditional Use Permit. As of October 2016, of the 375 Signal Hill Petroleum wells, 69 are in drill sites (18%), while 306 are outside drill sites (82%). Redrilling and repair work is permitted for established wells and occurs regularly. Below are images of active wells that can be used in oil operations today.

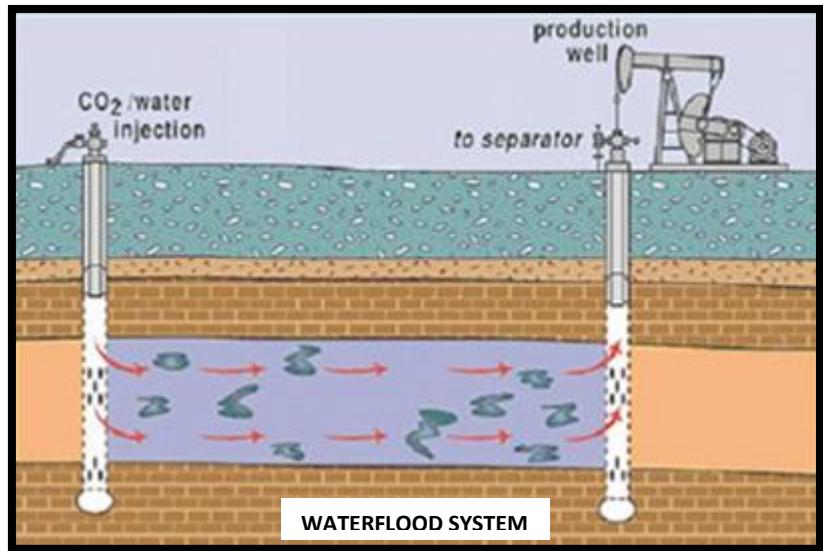
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<sup>3</sup> Available at [www.conservation.ca.gov/dog](http://www.conservation.ca.gov/dog)



## *Injection Wells*

Water injection involves pumping pressurized water into the oil reservoir by use of an injection well which moves the oil in place and recovery of the oil through the use of a production well which pulls both the oil and water to the surface. Water must be injected to increase oilfield pressure; a mix of water and oil (with a small amount of natural gas) is then pumped out of wells. Without active pumping, liquids stop moving and the well ceases operation. Water is injected in from 2,500 to 6,000 feet at a maximum pressure of 1,800 psi. Every injection well is monitored daily as to injection rate and pressure, the data is collected and reported to DOGGR monthly. Every injection well receives an annual inspection by DOGGR to review the conditions of well head and to confirm the certification of the test gauge.



### *Idle Wells*

A well shall be deemed to be an idle well if, the well does not produce an average of two barrels of oil per day or one hundred cubic feet of gas per day for a continuous six months period during any consecutive five-year period prior to or after January 1, 1991, except that an active water injection well shall not be classified as an idle well. DOGGR requires operators of idle wells to test them periodically to ensure that no damage is occurring to oil and gas reservoirs or groundwater. An idle-well test for DOGGR may be as simple as a fluid-level survey or may be a more complicated well-casing mechanical integrity test. The City cannot require that an idle well be abandoned. Therefore, idle wells can be reactivated at any time.

### *Abandoned Wells*

When a well is no longer needed, either because the oil or gas reservoir becomes depleted, or because no oil or gas was found (called a dry-hole), the well is plugged and abandoned. Abandonment of oil wells in the field began shortly after the field was discovered therefore, there are numerous abandoned oil wells throughout the City. Abandoned wells were typically backfilled, abandoned wells on vacant properties are typically unseen and require excavation to locate them and existing development in the City may be over or near an abandoned oil well that is below ground.

Abandonment of an active or idle oil well is governed by SHMC Chapter 16.23 (Abandonment of Wells) and state law.<sup>4</sup> DOGGR has established standards for the abandonment of wells and requires well operators to show that wells have been properly shut down. This includes submittal of wellbore schematic diagram with casing intervals and sizes, perforation locations, cement plug depths inside casing, and the location of the cement outside casing. DOGGR reviews and approves plugging requirements to minimize the potential for subsurface contamination (to oil and gas reservoirs or ground water supplies) and to minimize hazardous surface conditions. Prior to commencement of abandonment or re-abandonment, the permittee or other responsible party shall provide a copy of the DOGGR approval to abandon said well and obtain a City issued abandonment permit from the Oil Services Coordinator. The cost to abandoning or re-abandoning a well is very high, ranging from \$25,000 - \$100,000 and up.



## Products and Processing

A mix of water and oil and small amount of natural gas is pumped out of wells. Approximately 97 percent of the liquid pumped from Signal Hill wells is salt water, with the remaining 3 percent mostly crude oil. Liquids pumped from oil wells are transported via pipeline to two processing facilities in Signal Hill. At these processing facilities, the water/oil mix is broken down into its constituent parts. Salt water is pressurized and sent to water injection wells, where it is re-injected into the oilfield. Crude oil is sent via pipeline to refineries throughout Southern California. Wells are also connect to a gas vacuum system pipeline and taken to a turbine or processing facility.

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<sup>4</sup>[Public Resources Code Section 3208.](#)

## Federal, State and Local Agency Oversight

Oil operations are under the oversight of several federal and state agencies for various aspects for example, pipelines, transportation, vehicles, emissions, materials handling, spills, well operations are managed by different agencies. A list of various agencies and areas of oversight for oil operators is provided in **Table 1** and more detailed information on Division of Oil, Gas and Geothermal Resource and City oversight provided below.

**TABLE 1 Agency's with Oil Operations Oversight**

Agency	Area of Oversight	Example of Area of Coverage
Department of Transportation Pipeline & Hazardous Materials	Oil and Natural Gas Facilities and Pipelines (OPA)	Facility Response Plans and Spill Equipment
U.S. Environmental Protection Agency	Environmental Activity, Oil Spills, Greenhouse Gas Emissions	Facility Response Plans and Spill Prevention; Containment and Countermeasure Plans; Facility Greenhouse Gas Emissions
California Environmental Protection Agency	Manage local California Unified Program Agencies (CUPA)	Los Angeles County Fire Department
Los Angeles County Fire Department (CUPA for Signal Hill)	Hazardous Materials Handler; Hazardous Waste Generator, Above Ground Storage Tanks Program, California Accidental Release Prevention Program, California Uniform Fire Code	Consolidated Contingency Plan; Hazardous Material Inventory Program; California Accidental Release Prevention Program
Department of Toxic Substance Control	Hazardous Waste	Hazardous Waste Accumulation, Storage and Disposal; Regular disposal of solvents, used oil, antifreeze, automotive batteries, universal and electronic waste
California Air Resource Board	Mobile Source Emissions, Criteria and Hazardous Air Pollutants, Greenhouse Gas Emissions	On-road and off-road vehicle emissions and portable vehicle emissions
South Coast Air Quality Management District	Stationary Air Emission Sources, Criteria and Hazardous Air Pollutants	Natural gas turbine emissions; minor combustion device emissions, internal combustion engines, process heater emissions, fugitive gas leaks from pipelines, compressors, valves, fittings, flanges
Division of Oil Gas and Geothermal Resources	Drilling, operation, maintenance, and plugging and abandonment of natural gas and geothermal wells; lease management and injection management	Annual oil/injection well equipment/signage/containment/area inspections; well work plan review and permit issuance; idle well inspection and testing; injection well 3rd party surveys/annual rate/pressure inspections and monthly reporting

City of Signal Hill	Drilling for production, processing, storage and transport by pipeline of petroleum and well abandonment	Well discovery permit; well leak test permit; methane site assessment permits; methane barrier plan check; well abandonment reports; annual active and idle well permits; annual inspections
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### *Division of Oil, Gas and Geothermal Resources*

The Division of Oil, Gas, and Geothermal Resources was formed in 1915 to address the needs of the state, local governments, and industry by regulating statewide oil and gas activities with uniform laws and regulations.

DOGGR is charged with implementing Section 3000 of the *Public Resources Code*. With oversight of the drilling, operation, maintenance, and abandonment of wells and the operation, maintenance, and removal or abandonment of tanks and facilities attendant to oil and gas production, including pipelines that are within an oil and gas field, so as to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil and gas deposits from infiltrating water and other causes; loss of oil, gas, or reservoir energy, and damage to underground and surface waters suitable for irrigation or domestic purposes by the infiltration of, or the addition of, detrimental substances.

Every oil, gas, or geothermal well drilled in California has information about that well such as the history of work done, permits issued, inspections made, and well logs run called a well record. The DOGGR District 1 office maintains well records for wells in Signal Hill. DOGGR well records are open to public inspection.

### *City Regulatory Oversight*

In 1942, the first Signal Hill Oil Code was adopted and it was significantly revised in 1964. In 1990, the City convened an Oil Code Committee to initiate another comprehensive update to the 1964 Oil Code. The 1990 Oil Code regulated the following: drilling of new wells, re-drilling of existing wells and abandoning wells; waterflood injection; location of drill sites; noise standards; surface mitigation measure recommendations; methane gas venting; property maintenance; landscaping; development constraints; and, vehicular access for oilfield equipment.

The City's 1990 code required developers or property owners intending to develop, to first obtain written approval (i.e., certification letter and stamped site plans) from DOGGR documenting compliance with

the provisions of the Construction Site Plan Review Program (CSPRP) prior to issuance of a grading, building permit, or development permit whichever should occur first in the City's entitlement process. In 2010, DOGGR abruptly changed the CSPRP, and discontinued the process of providing a certification letter along with the option of an equivalent standard for well abandonments. In addition, DOGGR discontinued conducting the leak testing that had been the practice in District 1. Because of the City's Oil Code strict reliance upon the DOGGR certification process and the subsequent certification letter, the City was left with an obsolete Oil Code with respect to the determination to build over an abandoned well. This created an extreme hardship for the City in that no development permits could be issued for properties with abandoned wells until the Oil Code was amended.

In order to replace the previous DOGGR certification letter review process with safe and responsible City standards, the City conducted special technical studies on past and present oil operations, collected, collated and analyzed thousands of documents dating back nearly two decades. The contents of the studies and details of the current oil code are discussed above.

In 2015, the City's Oil Code was amended. One amendment was to the title. The new title is the Oil and Gas Code, which recognizes the additional gas resource in the field even though the prominent regulatory resource is oil and that it is also regulated by the SHMC. Additional updates reflected changes to the standards and procedures for well surveys, leak testing and venting, and establish regulations for development on properties with abandoned wells. Site restoration requirements for well abandonments were added and an equivalency standard related to the City's authority regarding development over and in close proximity to abandoned wells was established. In addition, all development projects in the city would be required to conduct a methane assessment and the results of each assessment would dictate the need for any methane mitigation systems. The sections of the old Oil Code related to drilling of new wells, re-drilling of existing wells and abandoning wells; waterflood injection; location of drill sites; noise standards; property maintenance; and landscaping remained in place.

Per the Oil and Gas Code, at least one time per year, the City Oil Services Coordinator inspects the wells and well sites for compliance with the provisions of the City Oil and Gas Code. In the event a violation is found, the inspector shall provide notice to the operator and the operator shall have thirty days from the date of the notice to correct the violation.

## C. Public Safety Services

### Fire Protection

Fire protection services in Signal Hill are provided by contract through the Los Angeles County Fire Department (LACoFD). Primary response to incidents within Signal Hill is provided by Fire Station No. 60, located at 2300 E. 27<sup>th</sup> Street. Station No. 60 houses: 1 paramedic engine and is manned by 4 firefighters at all times. These firefighters are trained to provide emergency medical attention. The estimated response time for this station is up to 3 to 4 minutes to any location in Signal Hill.<sup>5</sup> This station is part of Battalion 9, which includes a total of 9 fire stations serving the cities of Bellflower, Cerritos, Hawaiian Gardens, Lakewood, and Paramount, in addition to Signal Hill.

Fire stations in the area are listed in **Table 2** and mapped on **Figure 1**. LACoFD maintains mutual aid agreements with other regional fire agencies, including the Long Beach Fire Department, which has stations in the vicinity of Signal Hill.

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TABLE 2 Area Fire Stations

Station No.	Location	Distance to Signal Hill*
<b>LOS ANGELES COUNTY FIRE DEPARTMENT</b>		
60	2300 E. 27 <sup>th</sup> Street, Signal Hill	--
122	2600 Greenmeadow Road, Lakewood	1.2 miles
45	4020 E. Candlewood Street, Lakewood	2.9 miles
<b>LONG BEACH FIRE DEPARTMENT</b>		
7	2295 Elm Avenue, Long Beach	0.4 mile
9	3917 Long Beach Boulevard, Long Beach	0.8 mile
17	2241 Argonne Avenue, Long Beach	0.9 mile

\*Distance from nearest Signal Hill boundary.

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### Peakload Water Supply Requirements

The City Water Department provides water for domestic and fire-fighting purposes for the entire City. Currently, water supplies are via two City operated groundwater production wells (Well #7 and #8),

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<sup>5</sup> Phone conversation with Captain Nagaoka, LACoFD, August 17, 2010.

located in the North Long Beach area. The City can also receive imported water from a connection with the Metropolitan Water District regional water transmission system. Water storage is provided from three storage reservoirs, with water delivery to higher pressure zones achieved from three booster pump stations.

The Gundry Reservoir and pumping facility was constructed in 1929 and has a storage capacity of 4.7 million gallons. This facility is located in the northern part of the City at Reservoir Park. Two hilltop reservoirs and pumping facilities (one below Hilltop Park and the other on Temple Avenue, south of Skyline Drive) were constructed in the late 1990s and have a combined storage capacity of 2.6 million gallons. In addition, the City can also receive up to 3,350 gallons per minute of imported water supply from a service connection (CENB-19) to the Metropolitan Water District. The existing reservoirs, pumping facilities, and imported water supply are adequate for the City's projected growth and no further expansion of the system is considered necessary to meet peakload demands.

LACoFD has reviewed and approved the fire storage and fire flow requirements for the various land use categories throughout the City. As part of the 2005 Water Master Plan, an analysis of both fire storage and fire flow was conducted. The results indicate that there is adequate fire storage within the City's water system to meet LACoFD requirements. The fire flow analysis results indicate that the water system as a whole is adequate to meet the required fire flow demands approved by LACoFD. The analysis did identify some specific locations where fire flow inadequacies may exist within the water system. These locations are identified in the 2005 Water Master Plan and are mostly related to the existence of dead-end water mains. The an update to Water Master Plan (2015) is currently being reviewed and will be adopted by the City Council in the near future. The 2015 plan provides a plan for the City's water system over the next 10 years.

To improve existing infrastructure and reliability the 2011/12 through 2015/16 Capital Improvement Plans included notable water projects such as:

- The dead-end water main at 20<sup>th</sup> Street and Alamitos Avenue was eliminated.
- An emergency interconnection with the Long Beach Water Department was constructed at Reservoir Park. The interconnection would provide an imported water supply to the Reservoir treatment plant, in the case of an emergency affecting water Wells #7 and #8 groundwater supply.
- In 2015, construction of water Well #9 project began. The Well is within the City and expected production capacity of 1.725 million gallons per day. The Well is equipped with nano-filtration

treatment to treat naturally occurring constituents in the groundwater. Well #9 is expected to be operation in December 2016 and will provide the needed water demand to service the City with imported water serving as an emergency back-up.

## Police Protection

Police protection in Signal Hill is provided by the Signal Hill Police Department (SHPD). As of 2016, the SHPD has 34 sworn officers and 19 civilian staff (14 full-time and 5 part-time) operating from one station located at 2745 Walnut Avenue. The police station is 21,500-square-feet and includes a fully functional Emergency Operations Center (EOC). (See **Figure 1.**)

Mutual aid agreements are in place with the Long Beach Police Department, Los Angeles County Sheriff's Department, and other regional law enforcement agencies. These agreements allow for assistance from other agencies in the event of a major crime or natural disaster that could not effectively be handled with the resources available to the SHPD. Nearby police stations are listed in **Table 3.**

TABLE 3 Area Police Stations

Station Name	Location	Distance to Signal Hill*
<b>SIGNAL HILL POLICE DEPARTMENT</b>		
Existing Headquarters	2745 Walnut Avenue, Signal Hill	--
<b>LONG BEACH POLICE DEPARTMENT</b>		
East Patrol Division	3800 E. Willow Street, Long Beach	0.4 mile
North Patrol Division	4891 Atlantic Avenue, Long Beach	1.8 miles

\*Distance from nearest Signal Hill boundary.

## Medical Services

Signal Hill is close to a number of health care facilities, as listed in **Table 4.** Long Beach Memorial Medical Center and Miller Children's Hospital, which are co-located on a single site, are immediately west of Signal Hill on Atlantic Avenue. Collectively, almost 1,800 hospital beds are available within a 1.5-mile radius of the City. Signal Hill is also served by the 237-bed Veteran's Administration Medical Center in Long Beach, about 2 miles southeast of the City. The City of Signal Hill currently contracts with CARE Ambulance Service for emergency medical transport.

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TABLE 4 Local Hospitals

Hospital	Location	No. of Beds	Distance to Signal Hill*
Long Beach Memorial Medical Center	2801 Atlantic Avenue, Long Beach	462	0.1 mile
Miller Children's Hospital Long Beach	2801 Atlantic Avenue, Long Beach	324	0.1 mile
Community Hospital of Long Beach	1720 Termino Avenue, Long Beach	416	0.2 mile
Pacific Hospital of Long Beach	2776 Pacific Avenue, Long Beach	184	0.5 mile
St. Mary Medical Center	1050 Linden Avenue, Long Beach	389	1.3 miles

\*Distance from nearest Signal Hill boundary.

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City of Signal Hill  
**GENERAL PLAN**  
Safety Element

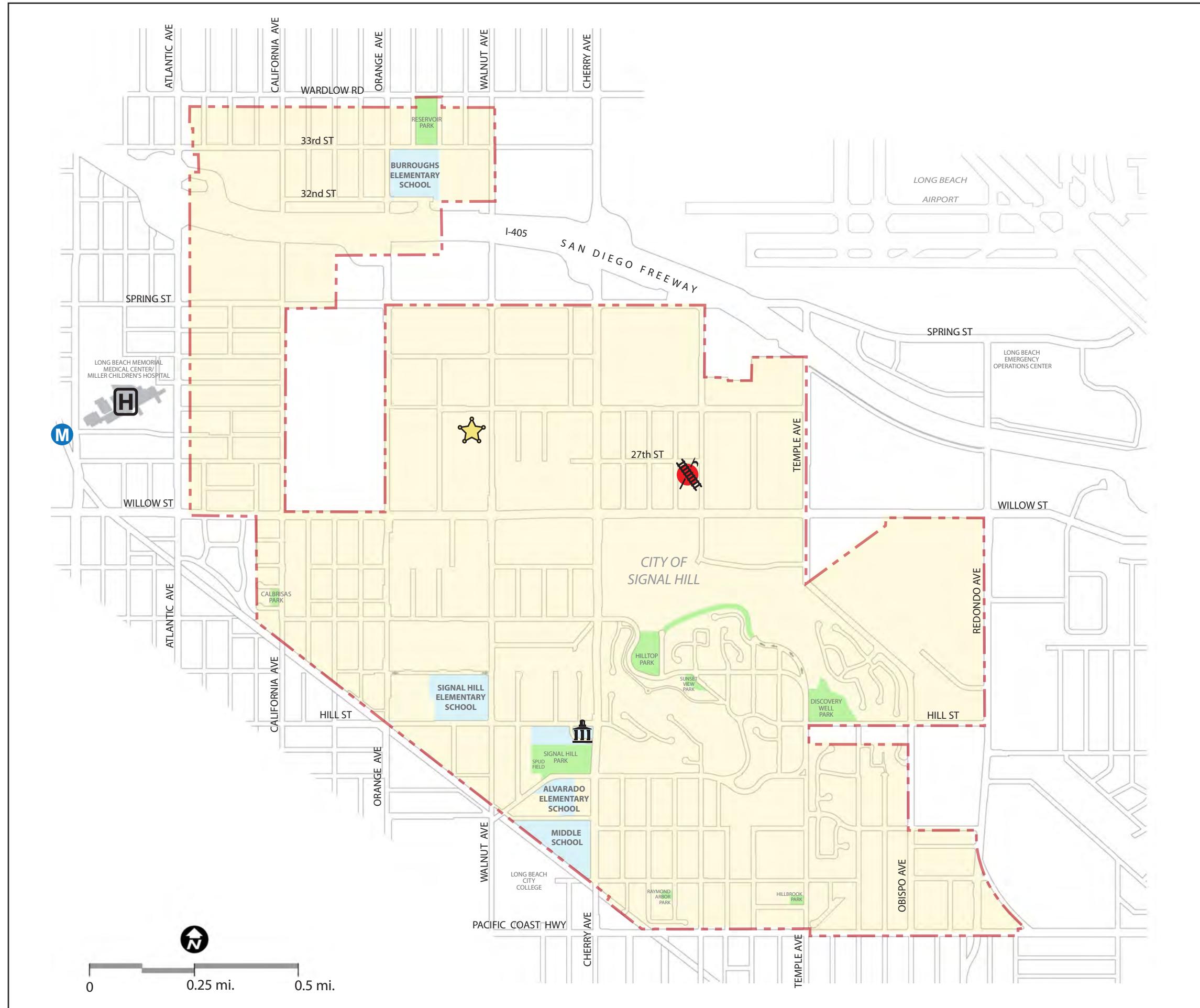


Figure 1  
Public Service Facilities

## **Disaster Preparedness**

The Signal Hill Emergency Operations Plan (EOP) provides detailed guidance to emergency service providers, City staff, and elected officials on actions required to maximize the City's preparedness for disaster, and to react effectively when disasters occur. The 2015 EOP updated the 2011 EOP document and was harmonized with the current California Emergency Management Agency template. The 2015 Signal Hill EOP is in full compliance with state requirements for content and scope. It has three goals:

- To provide effective life safety measures and reduce property loss.
- To provide for the rapid resumption of impacted businesses and community services.
- To provide accurate documentation and records required for cost recovery efforts.

The Chief of Police is responsible for the coordination of training events and exercises in support of the EOP, and for coordinating and disseminating annual reviews and updates to the document.

In addition, Signal Hill attempts to minimize the potential impacts of natural and man-made hazards through its Hazard Mitigation Plan (HMP), which is being updated concurrently with the 2016 Safety Element. The HMP has five goals: to protect life and property, enhance public awareness, preserve natural systems, encourage partnerships and implementation, and strengthen emergency services. To do this, the HMP analyzes hazards that occur within the City and establishes a mitigation plan including short- and long-term actions which should be implemented to reduce risk. A range of hazards are assessed in the plan, and four hazards considered most likely to impact the City were analyzed in greater detail: earthquakes, landslides, windstorms, and drought. The mitigation plan discusses potential funding sources and assigns responsibility for the accomplishment of each mitigation measure. The HMP remains a relevant and vital document through annual reviews and plan revisions every five years. The Hazard Mitigation Plan and all policies and programs contained therein, is incorporated in Appendix A. In addition, the HMP serves as one of implementation programs of the Safety Element

Both the HMP and EOP analyze risks to critical and essential facilities in the City. The HMP also includes mitigations which would reduce these risks. Critical facilities are defined as those necessary for government response and recovery activities, generally including 911 dispatch facilities, EOCs, schools hosting shelters, police and fire stations, public works facilities, local communications centers, hospitals, bridges and major roads, and shelters. In addition, the City of Signal Hill considers high-occupancy facilities such as shopping centers and high-risk facilities such as reservoirs and hazardous materials sites

to be critical facilities. Essential facilities are those facilities that are vital for the continued delivery of key city services or that may significantly impact the City's ability to recover from a disaster. These facilities generally include jails, public services buildings not considered critical facilities, and schools which do not house shelters. Table 5 lists critical facilities (excluding roadways and bridges) identified by the EOP.

**TABLE 5 EOP Critical Facilities**

Facility	Address
<b>GOVERNMENT AND COMMUNITY FACILITIES</b>	
Alvarado School	1900 E. 21 <sup>st</sup> Street
Burroughs School	1260 E. 33 <sup>rd</sup> Street
City Yard	2175 E. 28 <sup>th</sup> Street
Discovery Well Park	2200 Temple Avenue
Jessie Elwin Nelson Academy	1951 Cherry Avenue
Las Brisas Community Center	2397 California Avenue
Los Angeles County Records	1401 Willow Street
Los Angeles County Fire Station No. 60	2300 E. 27 <sup>th</sup> Street
Signal Hill City Hall	2175 Cherry Avenue
Signal Hill Community Center	1780 Hill Street
Signal Hill Library (under construction in 2016/2017)	1770 E. Hill Street
Signal Hill /Long Beach Radio Towers	2321 Stanley Avenue
Signal Hill Police Department	2745 Walnut Avenue
Signal Hill School	2285 Walnut Avenue
Reservoir Park	3015 Gundry Avenue
<b>UTILITIES</b>	
Edison Substation	2999 Cherry Avenue
Gundry Reservoir	3315 Gundry Avenue
Hilltop Reservoir	Corner of Dawson Avenue/Skyline Drive
Sewer Lift Station 1	2000 Alamitos Avenue
Sewer Lift Station 4	2200 Spring Street
Sewer Lift Station 4a	2275 21 <sup>st</sup> Street
Temple Reservoir	2207 Temple Avenue
Water Well No. 9	2175 E. 28 <sup>th</sup> Street
<b>MAJOR HAZARDOUS MATERIALS LOCATIONS</b>	
Tesoro Hathaway Terminal (Tank Farm)	2350 Hathaway Avenue
Shell Terminal (Tank Farm)	2457 Redondo Avenue

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**TABLE 5 EOP Critical Facilities**

Facility	Address
Signal Hill Petroleum	1215 E. 29 <sup>th</sup> Street
Signal Hill Petroleum	2700 Combellack Drive
Signal Hill Petroleum	3365 E. Grant Street
HIGH-OCCUPANCY STRUCTURES	
Atlantic Medical	701 E. 28 <sup>th</sup> Street
Best Buy	2701 Cherry Avenue
Boulevard Buick	2850 Cherry Avenue
Comfort Inn	3201 E. Pacific Coast Highway
Costco	2200 E. Willow Street
Courtyard Care	1880 Dawson Avenue
Food-4-Less Market	1600 Willow Street
Glenn Thomas Dodge	2100 Spring Street
Home Depot	751 E. Spring Street
Home Depot	2450 Cherry Avenue
Kaiser Permanente Medical Offices	845 Willow Street
Long Beach BMW	1600 E. Spring Street
Long Beach Mini	2998 Cherry Avenue
Long Beach Chrysler Jeep	2800 Cherry Avenue
Long Beach Honda	1500 E. Spring Street
Long Beach Mercedes-Benz	2300 Spring Street
Long Beach Nissan	1800 E. Spring Street
Office Depot Store	2301 E. Willow Street
Office Depot Warehouse & Office	3366 Willow Street
Petco	3065 California Avenue
PetsMart	2550 Cherry Avenue
Queen City Motel	3555 E. Pacific Coast Highway
Target Store	950 E. 33rd Street
Turner's Guns	2201 E. Willow Street
Universal Care Office	1600 Hill Street
U.S. Bank	2633 Cherry Avenue

Similar to the local HMP adopted by the City of Signal Hill, an All-Hazard Mitigation Plan (updated February 2014) has been adopted by the Los Angeles County Board of Supervisors. This plan analyzes risks and provides mitigations for unincorporated areas throughout the county, as well as for County-

provided services utilized by incorporated cities. As Signal Hill contracts for fire protection services with the County, risk analysis and mitigation for such services are covered by the County-adopted plan.

## **Emergency Operations**

The EOP describes the City's emergency response and recovery operations. Emergency operations are managed in one of three modes, depending on the magnitude of the event:

- **Level One – Decentralized Coordination and Direction.** A minor to moderate incident wherein local resources are adequate and available. A local emergency may or may not be proclaimed. The EOC may or may not be activated. Off-duty personnel may be recalled.
- **Level Two – Centralized Coordination and Decentralized Direction.** A moderate to severe emergency wherein local resources are not adequate and mutual aid may be required. Key management level personnel from the principal involved agencies will co-locate in a central location to provide jurisdictional or multi-jurisdictional coordination. A local emergency will be proclaimed. The EOC should be activated. Off-duty personnel may be recalled.
- **Level Three – Centralized Coordination and Direction.** A major local or regional disaster wherein resources in or near the impacted area are overwhelmed and extensive state and/or federal resources are required. A local emergency will be proclaimed. All response and early recovery activities will be conducted from the EOC. All off-duty personnel will be recalled.

As discussed under Police Protection, above, the EOC component of the police department serves as a centralized location for emergency and disaster management.

Signal Hill Municipal Code (SHMC) Chapter 2.76 (Emergency Organization and Functions) creates a Disaster Council to develop emergency and mutual aid plans and agreements. The Disaster Council consists of the Mayor, Director of Emergency Services, Assistant Director of Emergency Services, and other members as determined by the City Council. It is responsible for the preparation of the EOP that provides for the mobilization of resources in emergency situations. The City Manager serves as Director of Emergency Services. The Director of Emergency Services is authorized to direct emergency organization within the City, request the proclamation of an emergency by the City Council or the Governor, and represent the City in dealings with public and private entities related to emergencies, among other powers.

Signal Hill's emergency management programs maintain compliance with the federally-mandated National Incident Management System (NIMS) and the state Standardized Emergency Management System (SEMS) through regular training and disaster preparedness exercises for employees and the community. SEMS (Title 19, Division 2 of the Code of California Regulations) requires local governments within each county be organized into a single operational area for the purposes of emergency management. Signal Hill is part of the Los Angeles County Operational Area, which is managed by the Los Angeles County Office of Emergency Management (LACOEM). This Operational Area is further divided into eight Disaster Management Areas. Signal Hill is part of Disaster Management Area F, which also includes the cities of Long Beach and Avalon. The Disaster Management Area Coordinator (DMAC) for Area F is the Long Beach Fire Department Disaster Management Bureau, which is based out of the City of Long Beach EOC (located 0.5 mile northeast of Signal Hill at 2990 Redondo Avenue). The DMAC represents the region at operational area, regional, and state meetings and events.

The Los Angeles County Operational Area Citizen Corps Council is a volunteer component of the LACOEM and operates with support from the Federal Emergency Management Agency (FEMA). Citizens Corps Councils help coordinate volunteer activities that make communities safer and better prepared to respond to emergency situations.

## **Community Organizations, Volunteer Groups, and Safety Programs**

A range of community organizations, volunteer groups, and safety programs are in place to assist with public safety and emergency management in the City. Among these are:

- **Citizens' Police Academy.** The SHPD offers the Citizens' Police Academy, a program taught by police officers and staff members and which gives an inside look at law enforcement in the community. Attendees learn about patrol operations, criminal law, narcotics enforcement, investigative techniques, crime prevention, emergency dispatch procedures, the court system, and many other areas of law enforcement.
- **Explorer Post 806.** The Explorer Post is a youth-oriented program sponsored by the SHPD. Members of the Explorer Post receive basic instruction in all phases of law enforcement, including crime prevention, investigation, fingerprinting, drug and narcotics recognition, first aid, Vehicle Codes, Penal Codes, juvenile crimes, truancy, and other related fields. The basic program emphasizes good citizenship and high moral character.

- **Community Emergency Response Team (CERT).** CERT members assist citizens and police, fire, and medical professionals during major disasters. The SHPD, in conjunction with the LACoFD, offers CERT training to the public. Training is free of charge and provided in emergency preparedness, fire safety, light search and rescue operations, medical operations, disaster psychology, and disaster simulation.
- **Community Volunteer Program.** The SHPD recruits community volunteers to support police services. Volunteers receive classroom training, field training, and in-service training, and assist with functions such as parking enforcement, vacation watch, speed watch, clerical functions, bicycle registration, fingerprinting services, and newsletter creation.
- **Emergency Network of Los Angeles.** This network consists of Los Angeles County nonprofit community based organizations that provide assistance to individuals, families, and organizations following emergencies and disasters. Network organizations include the American Red Cross – Los Angeles Region, Los Angeles Regional Food Bank, the Salvation Army, and others.
- **Neighborhood Watch.** Neighborhood Watch programs are in effect in Signal Hill. These are crime prevention programs that stress education and community cooperation. Neighborhood Watch groups typically focus on observation and awareness as a means of preventing crime.

## Evacuation Routes

The roadway grid in and around Signal Hill provides for multiple means of evacuation from natural, technological, or human-caused disasters. Arterial roadways and the I-405 freeway are major evacuation routes (see **Table 6** and **Figure 2**). Dead-end streets limit movement over the I-405 in the northern part of the City and the former Pacific Electric Railway right-of-way along the City's southwest boundary limit roadway connections in some areas. Nonetheless, the presence of numerous bridges across these barriers makes existing evacuation routes adequate to serve the City's population; no major improvements are considered necessary to maintain emergency access. Future development in the City would be required to meet minimum roadway widths and subdivision design requirements as established by SHMC Titles 15 (Building and Construction) and 18 (Subdivisions) and Los Angeles County Fire Department. These standards ensure that roadways are wide enough to allow emergency vehicle access during emergencies and permit the efficient movement of large numbers of people.

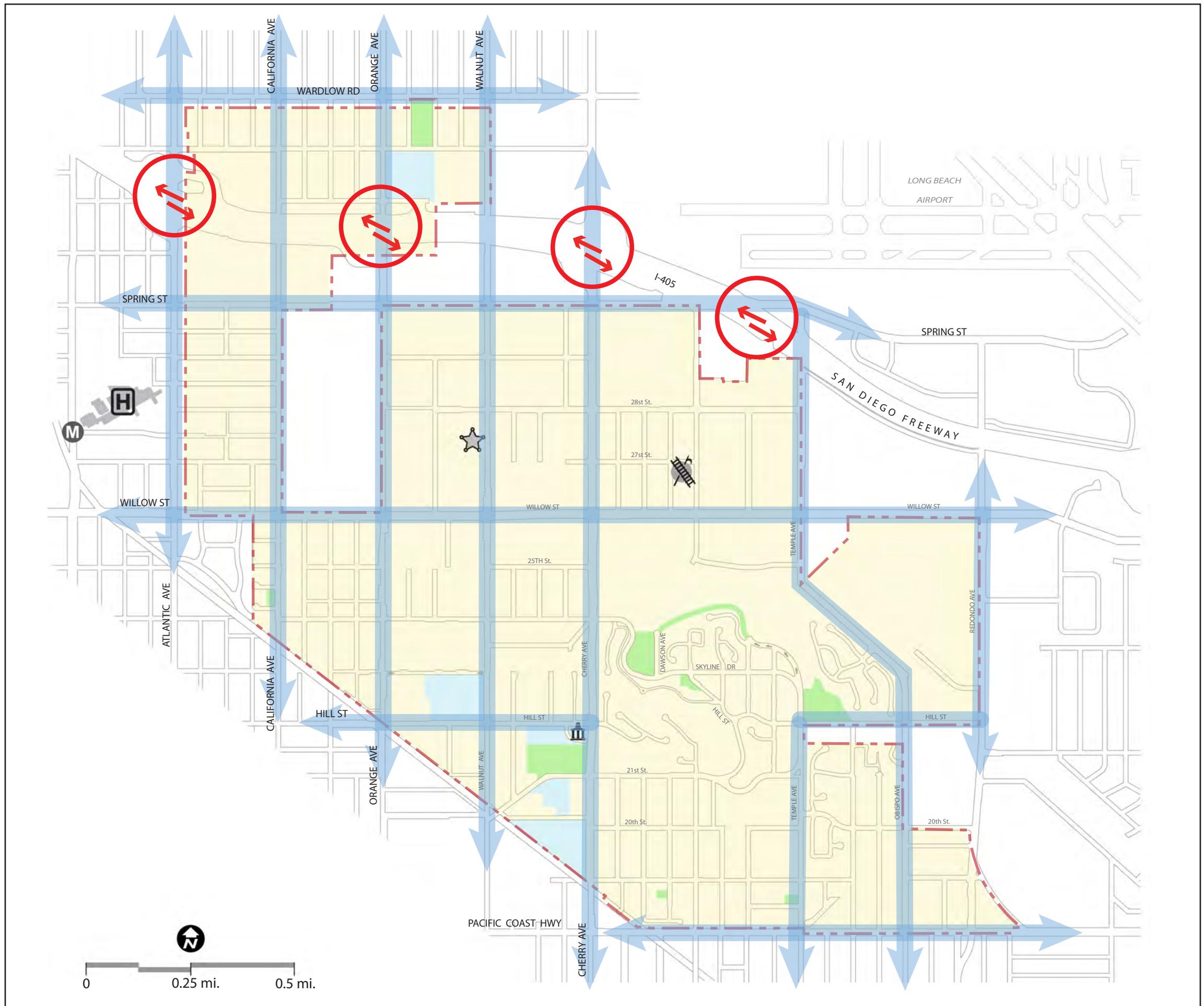
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**TABLE 6 Major Evacuation Routes**

North-South Routes	East-West Routes
Atlantic Avenue	Pacific Coast Highway
California Avenue	Hill Street
Orange Avenue	Willow Street
Walnut Avenue	Spring Street
Cherry Avenue	Wardlow Road
Redondo Avenue	I-405 Freeway



City of Signal Hill  
**GENERAL PLAN**  
Safety Element



- - - City of Signal Hill Boundary
- Evacuation Route
- ↔ Freeway Access Point

Figure 2  
**Evacuation Routes**

## **III. ISSUES AND CONSTRAINTS**

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### **A. Seismic and Geologic Hazards**

#### **Earthquakes**

Signal Hill is located in a seismically active region, and major regional faults create the risk of substantial earth shaking and potential ground rupture in the area. Within Los Angeles County, there are over 50 active and potentially active fault segments, an undetermined number of buried faults, and at least 4 blind-thrust faults capable of producing damaging earthquakes.

Earthquakes present a multitude of potentially dangerous consequences that can include ground rupture, ground failure, and landslides. A catastrophic earthquake would severely strain the emergency response and recovery capabilities of federal, state, and local governments, and profoundly impact the regional and state economy.

#### **Regional Faults**

Major regional faults are displayed in **Figure 3**, along with the approximate epicenters of significant historical earthquakes.

The San Andreas Fault is the most significant regional fault, and is recognized as being capable of producing an earthquake of magnitude 8.0+ on the Richter scale. In 2007, the Working Group on California Earthquake Probabilities projected that the Southern California segment of the San Andreas Fault has a 59 percent chance of producing a magnitude 6.7 or greater earthquake within 30 years.<sup>6</sup> Despite this risk and because the San Andreas Fault is located over 40 miles from Signal Hill, smaller faults located closer to the City, including the Newport-Inglewood and Whittier Faults, are generally considered a greater risk to the area's residents and infrastructure.

**Table 7** lists the most significant earthquakes to have impacted Signal Hill over the past century.

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<sup>6</sup> The Working Group on California Earthquake Probabilities consists of the U.S. Geological Survey, California Geological Survey, and Southern California Earthquake Center. Their report is available at [www.wgcep.org](http://www.wgcep.org).

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**TABLE 7 Major Historical Earthquakes**

Year	Magnitude	Name	Fault
1933	6.4	Long Beach	Newport-Inglewood Fault
1971	6.6	San Fernando (Sylmar)	San Fernando Fault
1987	5.9	Whittier Narrows	Whittier Fault
1994	6.7	Northridge	Northridge Thrust

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Sources: California Geological Survey, Southern California Earthquake Center



City of Signal Hill  
**GENERAL PLAN**

Figure 3  
**Regional Earthquake Faults & Major Historical Earthquakes**

## **Local Seismicity**

Locally, the Newport-Inglewood Fault System cuts diagonally across Signal Hill (see **Figure 4**). This is the most significant seismic feature in the area and is considered seismically active. The 1933 Long Beach earthquake resulted from activity on this fault (see **Figure 3** for epicenter location). Within the Newport-Inglewood Fault System, five faults have been identified in and in the immediate vicinity of Signal Hill: the Cherry Hill Fault, Pickler Fault, Northeast Flank Fault, Reservoir Hill Fault, and Wardlow Fault. These faults are generally in a northwest-to-southeast alignment. The Wardlow Fault is a pre-quaternary fault that has not ruptured in at least 2 million years, and is therefore considered inactive. All other faults are considered active.

The Newport-Inglewood Fault System is a nearly linear alignment of faults extending 45 miles along the southwestern side of the Los Angeles basin. It can be traced as a series of topographic hills, ridges, and mesas from the Santa Monica Mountains to Newport Beach, where it trends offshore. Structures along the zone of deformation act as groundwater barriers and, at greater depths, as petroleum traps. Continuing seismic activity has been evidenced most prominently by the 1920 Inglewood and 1933 Long Beach earthquakes.

## **Alquist-Priolo Earthquake Fault Zones**

The Alquist-Priolo Earthquake Fault Zoning Act<sup>7</sup> of 1972 was created to prohibit the location of most structures for human occupancy across the traces of active faults, thus lessening the hazard of fault rupture.

The three main provisions of the Act:

- require the California Geological Survey to produce maps of the surface traces of known active faults, including both the best known location where faults cut the surface and a buffer zone around the known trace(s);
- require property owners (or their real estate agents) to disclose that their properties lie within identified hazard zones; and,

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<sup>7</sup> California Public Resources Code Section 2621 et seq.

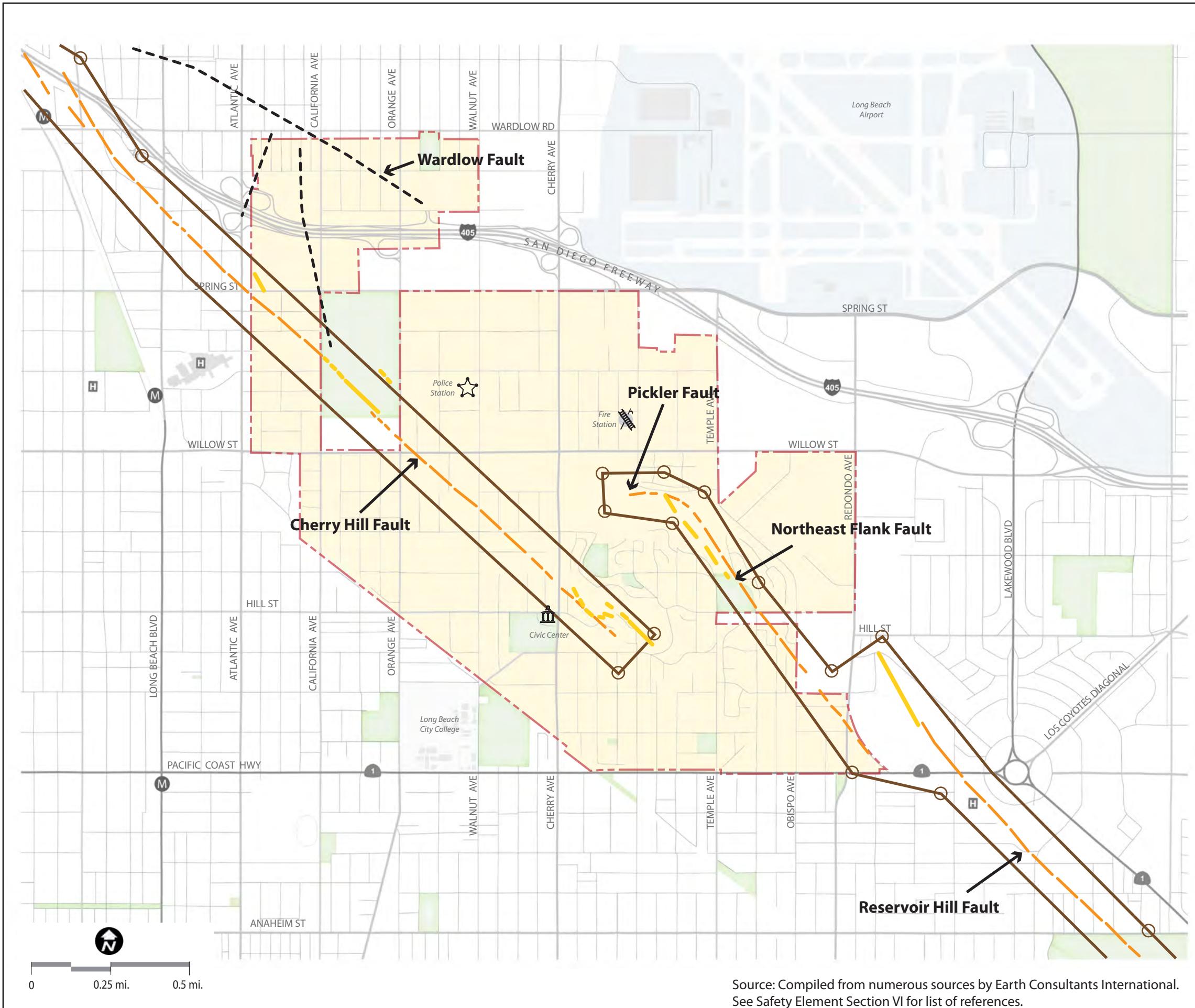
- prohibit new construction of projects, as defined by the Alquist-Priolo Act, within these identified hazard zones until a comprehensive geological study has been completed.

The City of Signal Hill complies with the Act through SHMC Chapter 15.04 (Building Code). The SHMC requires an engineering geology report be prepared for all projects within Alquist-Priolo zones, as well as other areas when deemed necessary by the City Engineer. Before projects can be permitted, the geologic investigation must demonstrate that proposed buildings will not be constructed across active faults. Structures for human occupancy must be set back at least 50 feet from active faults. The evaluation and written report must be prepared by a registered geologist.

Since the Newport-Inglewood Fault System is active, it has been designated as an Alquist-Priolo zone. The Alquist-Priolo Earthquake Fault Zones within Signal Hill are depicted on **Figure 4**.



City of Signal Hill  
**GENERAL PLAN**  
Safety Element



- City of Signal Hill Boundary
- Active Faults
- Active and Potentially Active Fault Traces
- Pre-Quaternary Faults
- Alquist-Priolo Earthquake Fault Zones

Note:

All faults shown are part of the Newport-Inglewood Fault Zone.

This map is intended for general land use planning only. Information on this map is not sufficient to serve as a substitute for detailed geologic investigations of individual sites, nor does it satisfy the evaluation requirements set forth in geologic hazard regulations.

Fault lines on the map are used solely to approximate the fault location. The width and location of the faults should not be used in lieu of site-specific investigations, evaluation, and design. Detailed geologic investigations, including trenching studies, may make it possible to refine the location and activity status of a fault. Not all faults may be shown. This map may be amended as new data become available and are validated.

Pre-quaternary faults are considered inactive and are not subject to the requirements of the Alquist-Priolo Earthquake Faults Zoning Act.

Figure 4  
**Local Fault Map &  
Alquist-Priolo Zones**

## **Unreinforced Masonry Structures**

The typical unreinforced masonry building has brick walls with no steel reinforcing bars embedded within them. The Unreinforced Masonry (URM) Law<sup>8</sup> requires cities and counties within Seismic Zone 4 (including Signal Hill) to identify hazardous unreinforced masonry buildings and consider local regulations to abate risks associated with such buildings through retrofitting and demolition. The URM Law does not apply to the following types of structures: warehouses and similar structures not used for human habitation, residential structures with five or fewer dwelling units, and historical properties. The City of Signal Hill has completed a building inventory and determined that there are no unreinforced masonry structures within the City that require action under the URM Law.

## **Liquefaction**

Liquefaction is a geologic process that causes various types of ground failure. Liquefaction typically occurs when loose, saturated sediment of primarily sandy composition is subject to strong ground shaking. When liquefaction occurs, the sediments involved experience a total or substantial loss of shear strength and behave like a liquid substance. Depending on other conditions, such as density, ground slope, and stratification, the temporary loss of strength may result in foundation failures, landslides, and subsidence.

To have a potential for liquefaction, three simultaneous conditions are necessary: 1) generally cohesionless soils, 2) high groundwater, and 3) groundshaking. California's Seismic Hazards Mapping Act provides for statewide mapping of seismic hazards based in part on an examination of these conditions. Mapping for Signal Hill is provided on **Figure 5**. As shown on the figure, only two small portions of the City are considered at risk from liquefaction. One area consists of a strip of land adjacent to and under the Columbia Street right-of-way (part of which is currently used for oil production) between Atlantic and California Avenues. The second area is a narrow band along the southwestern border of the City, adjacent to the right-of-way of the former Pacific Electric Railway. Notably, this area of liquefaction risk includes a large portion of the site of a Long Beach Unified School District middle school, Jessie Elwin Nelson Academy, (1951 Cherry Avenue). As a school district project, development on this site is subject to review by and required to meet the standards of the Division of the State Architect rather than

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<sup>8</sup> Government Code Section 8875 et seq.

the City of Signal Hill. The Division of the State Architect maintains regulations that appropriately mitigate liquefaction risks on development sites.

As required by the Seismic Hazards Mapping Act, areas at risk of liquefaction have been mapped where the historical occurrence of liquefaction and/or local geological, geotechnical, and groundwater conditions indicate a potential for future permanent, liquefaction-induced ground displacements such that mitigation would be required. Such mitigation would be intended to minimize seismic risks.

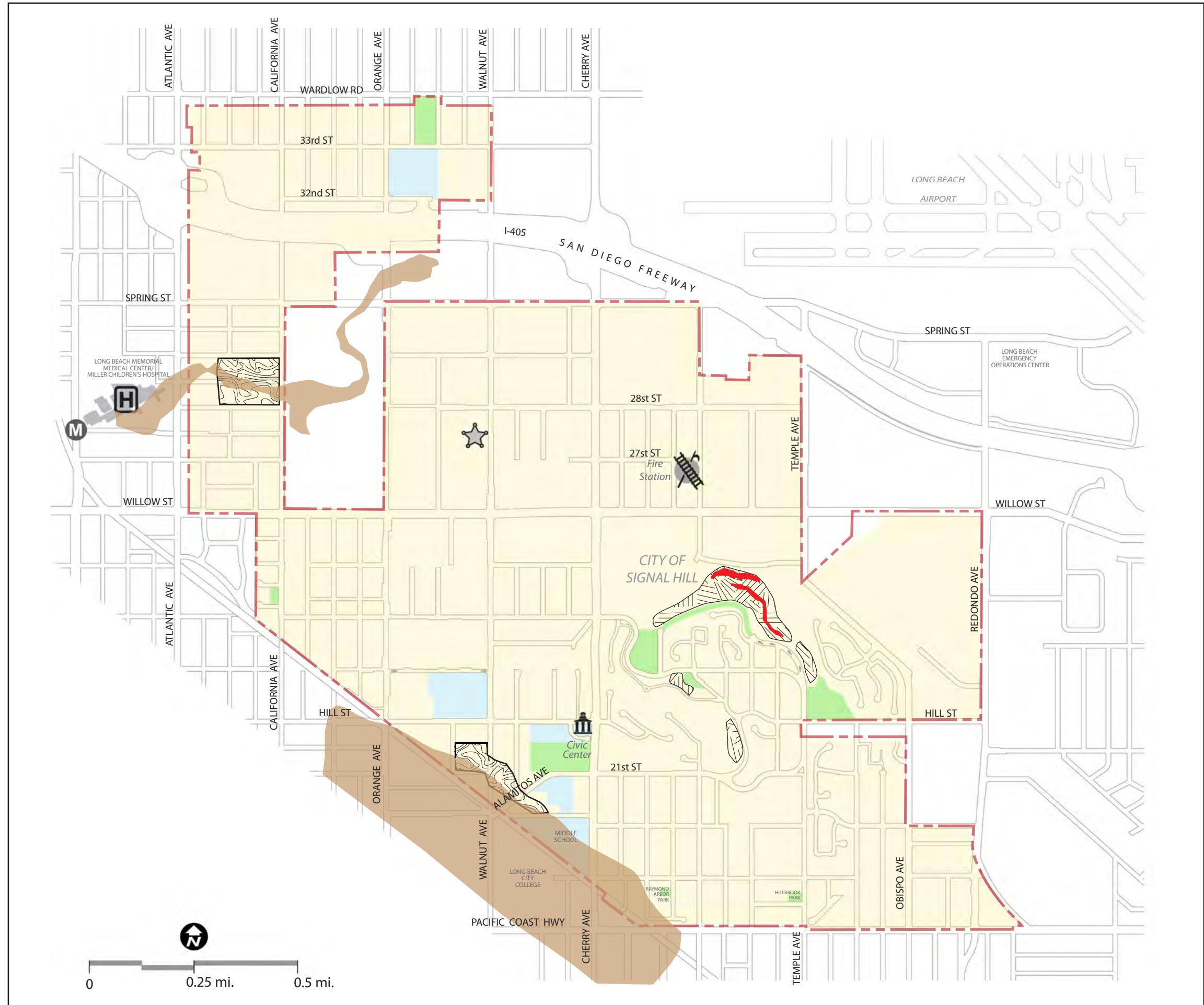
## Landslides

Landslides can result from earthquake-related ground shaking or failure of steep slopes due to water saturation or unstable soil conditions. Landslides can overrun structures and other property, and cause human injury or death. They can sever utility lines and block roads, thereby hindering rescue operations following an earthquake. Signal Hill was most recently impacted in 1998 when a portion of steep and unstable natural slope below Panorama Drive eroded due to heavy El Niño rains. The Seismic Hazards Mapping Act requires identification of landslide zones in which the stability of hill slopes must be evaluated. **Figure 5** outlines the areas of the City that are susceptible to landslides. Areas that previously experienced landslide movement and/or local topographic, geological, geotechnical, and groundwater conditions may indicate the potential for future, permanent ground displacements. If confirmed during site geotechnical analyses, site mitigation would be required.

The areas found susceptible to landslides are found in the upper reaches of Signal Hill. Development, completed mostly over the past decade, is located both above and below areas at risk of landslides. Geotechnical analyses were prepared for these developments, and risks associated with landslides were mitigated to reduce their potential impacts. As shown on **Figure 5**, two areas remain with landslide potential in the City, located north of Panorama Promenade and southwest of Sunset View Park.



City of Signal Hill  
**GENERAL PLAN**  
Safety Element



- - - City of Signal Hill Boundary
- Brown square: Liquefaction Hazard
- Light blue square: Undeveloped Land with Liquefaction Potential
- Red square: Landslide Movement Hazard
- Green square: Undeveloped Land with Landslide Potential

Source: Prepared by Earth Consultants International with data from the California Division of Mines and Geology.

Figure 5  
**Seismic Hazards**

## Soil Settlement and Expansion

The potential for seismic settlement to occur is based on the intensity and duration of ground shaking and the relative density of the subsurface soils. **Figure 6** shows the geologic units present in the Signal Hill. Information on the characteristics of these geologic units is provided in **Table 8**. As shown in the table, the Qop soil types which dominate Signal Hill have a limited expansion potential, with moderate expansion potential present only in clayey sections. The Qya and Qyfa which make up the remainder of the City have moderate to high expansion potential. In part because of the characteristics associated with the Qya and Qyfa geologic units, areas with these soils are considered to have a higher potential for liquefaction, as was previously shown on **Figure 5**. Development on these geologic units may be required to present geotechnical analysis before approval by the City.

TABLE 8 Geologic Units

Unit	Description
Qop	Old paralic deposits (late to middle Pleistocene; include the Lakewood Formation, terrace deposits, and Palos Verdes sand) – In the Signal Hill area, these are composed primarily of silt and sand with scattered gravel and fossiliferous lenses, capped locally with a reddish-brown weathered (soil) zone of clayey silt to clayey sand. These interfingered strandline, beach, estuarine, and colluvial deposits are mostly poorly sorted, moderately permeable, and medium dense to dense. The silt and sand sections, where exposed in slope faces, are susceptible to erosion and surficial slumping; the clayey sections may have a moderate expansion potential. May be corrosive to concrete.
Qya	Young alluvial floodplain deposits (Holocene and Late Pleistocene) – Composed mostly of soft clay, silt and loose to moderately dense sand and silty sand. These deposits are mostly poorly consolidated, poorly sorted, and permeable, and therefore potentially susceptible to liquefaction and differential settlement. Locally, these deposits may have a moderate to high expansion potential.
Qyfa	Young alluvial fan and valley deposits (Holocene and Late Pleistocene) – Composed of clay, sand, gravel and cobbles. These deposits are mostly poorly consolidated and poorly sorted, and are therefore compressible, potentially susceptible to collapse, liquefaction, and seismically-induced differential settlement. Locally, these deposits may have a moderate to high expansion potential.
-- <i>(Not Mapped)</i>	Artificial fill (compacted and uncompacted) – deposits of various thicknesses are known to occur locally in the Signal Hill area but are not mapped here. These deposits are typically associated with petroleum exploration and drilling activities, grading, and construction. Fills impacted with petroleum hydrocarbons and heavy metals may be encountered in areas that were previously part of an oilfield. These deposits are mostly poorly consolidated, poorly sorted, potentially compressible, and may have a moderate to high expansion potential.



City of Signal Hill  
**GENERAL PLAN**  
Safety Element



- - - City of Signal Hill Boundary
  - - - Faults
  - [Qop] Qop
  - [Qyfa] Qyfa
  - [Qya] Qya
- Please refer to Table 8 for a discussion of the characteristics of each geologic unit.

Note:

This map is intended for general land use planning only. Information on this map is not sufficient to serve as a substitute for detailed geologic investigations of individual sites, nor does it satisfy the evaluation requirements set forth in geologic hazard regulations.

Fault lines on the map are used solely to approximate the fault location. The width and location of the faults should not be used in lieu of site-specific investigations, evaluation, and design. Detailed geologic investigations, including trenching studies, may make it possible to refine the location and activity status of a fault. All faults may not be shown. This map may be amended as new data becomes available and are validated.

Source: Earth Consultants International

Figure 6  
**Geologic Units**

## **Subsidence**

Subsidence is the sinking or gradual lowering of the earth's surface. Subsidence can result from either natural geologic and/or man-made causes. Natural geologic causes are basin-downwarp, fault movement, sediment compaction, and relaxation of deep earth stresses. Man-made causes include groundwater pumping, mining, oil and gas production, river channelization, and surface loading.

As mentioned in the background, from about 1940 to 1960, a significant amount of subsidence (up to 29 feet in some areas) occurred in the Port of Long Beach area due primarily to oil and gas extraction in the Wilmington Oilfield. In the 1960s, steps were taken that successfully prevented further subsidence in the Wilmington Field. The main action required was the injection of water into the areas where oil was removed. The Wilmington field is located much deeper underground, than the Long Beach Oilfield therefore, Signal Hill is not subject to the same subsidence concerns as the Port of Long Beach area. Nonetheless, Signal Hill Petroleum, Inc. (SHPI), which controls over 80 percent of the oil wells in Signal Hill and the units, uses the same strategy of injecting water into the oil formation. This minimizes the risk of future subsidence resulting from oil extraction in the City.

## **B. Fire Hazards**

Fire hazards within Signal Hill may arise from three sources: open spaces with dry vegetation; urban development; and industry, particularly facilities associated with oil production, storage, and transportation. These fire hazards are discussed below.

### **Wildland Fire**

With development over the past 15 years, much of the open space near the peak of Signal Hill has been developed with housing. However, some fire hazards remain in areas that have not been developed and are covered with natural vegetation. Vegetation in these areas generally consists of grasses which become dry and highly flammable during the fire season in the summer and fall.

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire hazard severity zones throughout the state.<sup>9</sup> Designations include Unzoned (the lowest wildland fire risk), Moderate, High, and Very High. These designations take into account five major factors in wildland fire risk:

- **Vegetation:** Vegetation is “fuel” for a wildfire, but it varies over time. Fire hazard mapping considers the potential vegetation over a 50-year horizon.
- **Topography:** Fires burn faster on steep slopes.
- **Weather:** Fires burn faster and with more intensity where air temperatures tend to be high, relative humidity low, and winds strong.
- **Crown fire potential:** Under extreme conditions, fires burn up into trees and tall brush.
- **Ember production and movement:** Fire brands are blown ahead of the main fire, where they may enter buildings and ignite. This factor measures the likelihood of an area burning over a 30-to-50-year time period.

Fire hazard mapping for Signal Hill is provided in **Figure 7**. The City is unzoned, indicating a low potential for wildland fire; there are no Moderate, High or Very High fire hazard zones in Signal Hill.

## Urban Fire

Residential development covers approximately 35 percent of Signal Hill, ranging from single-story single-family homes to multi-story apartment and condominium structures. According to the California Department of Finance, as of January 1, 2010, Signal Hill housed 1,950 single-family homes and 2,494 units in multi-family developments.<sup>10</sup> A significant number of single-family homes are over 60 years old, and are in varying states of maintenance and repair. Fire is a particular risk for these older residences; however, the Fire Department is generally prohibited by legal restrictions from conducting inspections of these homes. Multi-family development is generally newer, with few such projects over 40 years old.

Residential development is subject to the requirements of the Signal Hill Fire Code (SHMC Chapter 15.08), which adopts by reference the California Fire Code. The California Fire Code is updated periodically with new regulations intended to minimize potential fire hazards. Effective January 1, 2011,

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<sup>9</sup> Available at [www.fire.ca.gov](http://www.fire.ca.gov).

<sup>10</sup> California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2010, with 2000 Benchmark*. Available at [www.dof.ca.gov](http://www.dof.ca.gov).

sprinklers are mandated for all new single-family homes. This requirement is intended to reduce the frequency and severity of house fires. It is estimated that the presence of sprinklers reduces deaths from fires by 83 percent.<sup>11</sup>

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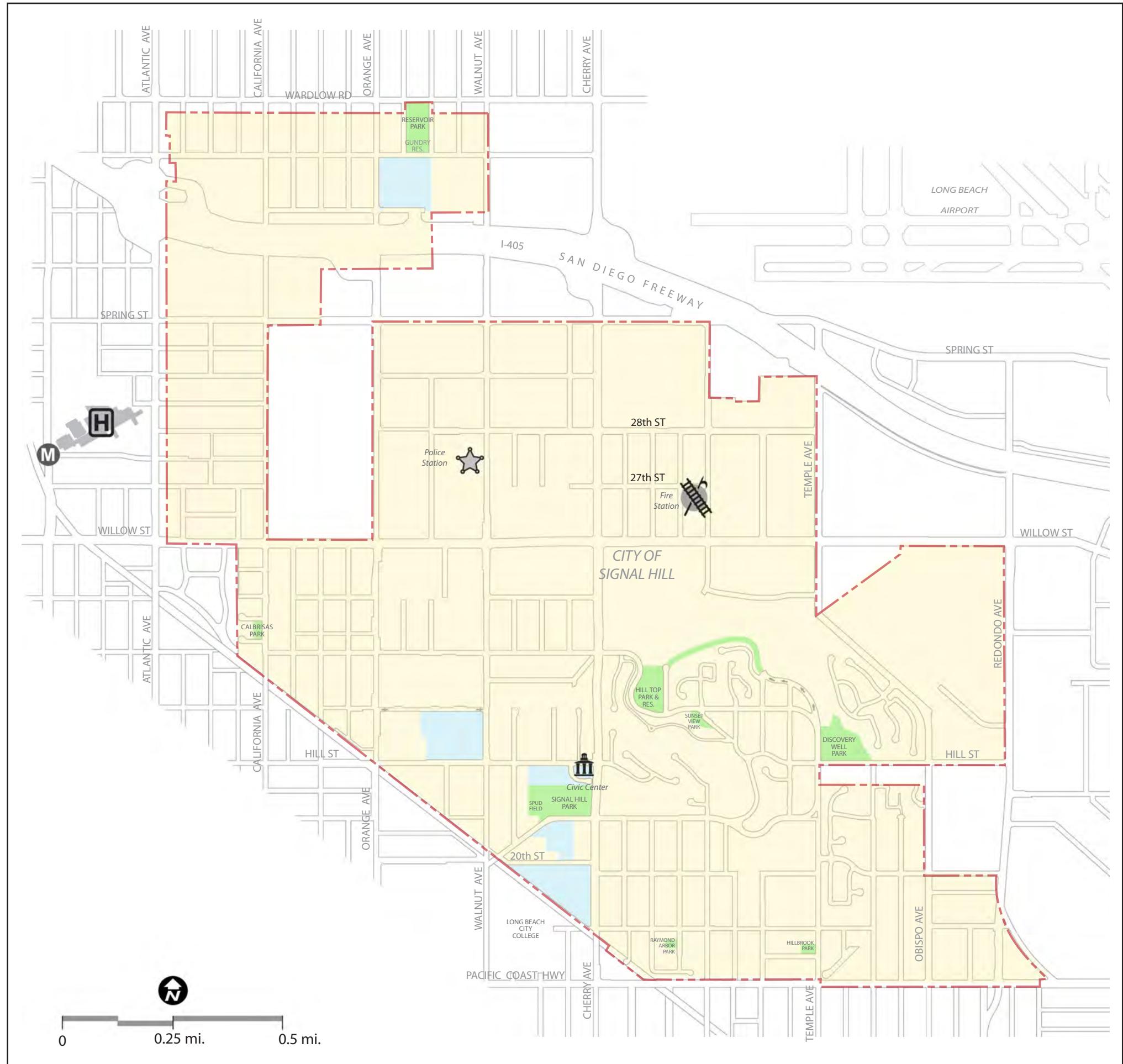
<sup>11</sup> National Fire Protection Association. *U.S. Experience with Sprinklers and Other Automatic Fire Extinguishing Equipment*. Available at <http://www.nfpa.org/assets/files/PDF/OSsprinklers.pdf>.



# City of Signal Hill

## **GENERAL PLAN**

### Safety Element



Source: Adapted from CAL FIRE Fire and Resource Assessment Program May 2012

## Figure 7

# Fire Hazard Mapping

## **Oil Fire Hazards**

Potential fire hazard associated with the oilfield is explosion or fire resulting from the ignition of accumulated methane gas, overheating of pumps due to mechanical failures can cause oil well fires; however, existing active wells pose only minor fire hazards. The liquid extracted from wells is a mixture of salt water and oil (with water typically composing 97 percent of the mix). This mix is substantially less combustible than pure oil. The water-heavy mixture, combined with required blowout prevention equipment, significantly reduces potential hazards from oil well fires. Some of the independent well operators store pumped liquids in fuel tanks on the well site. These tanks are subject to regulation and inspection by the state and LACoFD.

Oil facilities are subject to the requirements of the SHMC Fire Code; in addition, to minimize fire hazards associated with such infrastructure, the SHMC Oil and Gas Code restricts the drilling of new wells in residential districts and establishes minimum building setbacks for such facilities. Other City policies require proper landscape maintenance and refuse removal to limit fire hazards. To further reduce potential fire impacts to these and other surrounding land uses, storage facilities maintain onsite fire suppression equipment to allow for rapid response to emergencies. Employees are trained to use suppression equipment until Fire Department equipment arrives. In addition, safety is ensured through routine inspection by local, state, and federal authorities, including the City of Signal Hill; Los Angeles County Fire Department; DOGGR; the federal Pipeline and Hazardous Materials Safety Administration; and others. SHPI, which operates over 80 percent of the wells in Signal Hill, monitors oil well activity 24 hours per day, and wells are subject to daily physical inspection. SHPI staff and firefighters conduct periodic drills and walkthroughs of oil facilities.

The 2013 Los Angeles County Fire Code section 5706.3 requires building not necessary to the operation of the well shall not be constructed within 100 feet of the oil well and 300 feet if the building is used as a place of assembly, institution or school. The Fire Code allows the Chief to approve the use of alternative materials and methods, provided that he finds that the proposed design meets the intent of the code and is at least equivalent to that which is prescribed by the Code. Due to the uniqueness of the oilfield and pumping operations in the City of Signal Hill, there are several alternate methods of protection approved. Mitigation may be provided at the well or at the structure to allow specific buildings to be constructed 35 feet from an oil well.

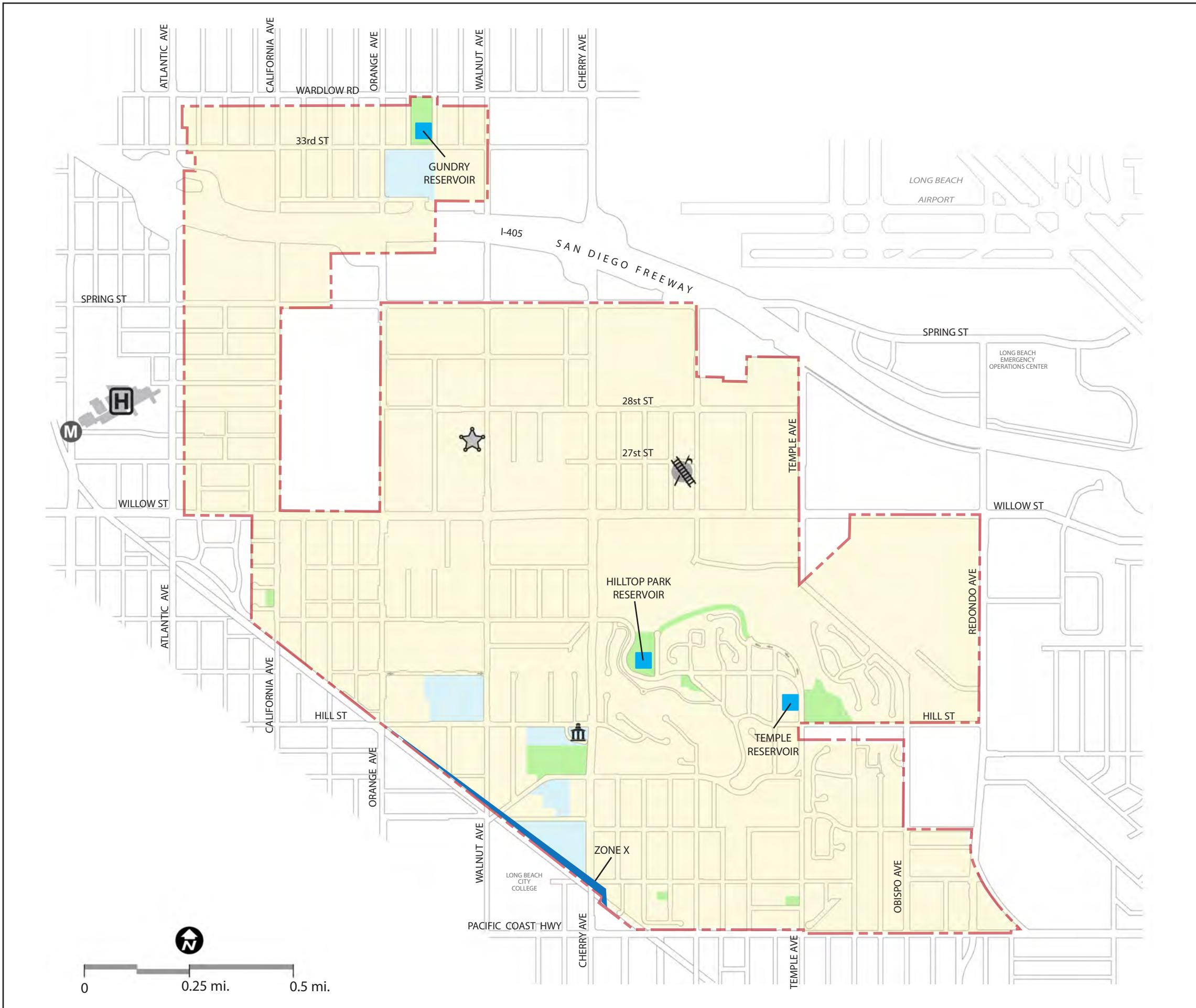
## C. Flood Hazards

In general, Signal Hill is not subject to flood hazards. Only a small area along the City's southwestern boundary is designated as Zone X on the FEMA's Flood Insurance Rate Map, indicating no major flood risk (see **Figure 8**). The remainder of the City is unzoned. Accordingly, there are no special flood hazard areas in the City. However, due to topography, infrequent but intense rainfall can present minimal flooding problems in parts of the City. The areas with the greatest potential for rainfall-related flooding are in localized areas to the south, southeast, and southwest of the Hilltop area. Although some flood control facilities are maintained by the City of Signal Hill, the majority are controlled by the Los Angeles County Flood Control District. New drainage facilities will be considered during the review process for development projects.

There is a remote possibility that one of the City-operated water reservoirs (as described under Peakload Water Requirements, above) could rupture and leak, resulting in localized flooding in some areas of the City if stored water is released rapidly. The risk of damage is minimized because the reservoirs are partially or completely buried, limiting the amount of water that could be released. In addition, all reservoir facilities in the City are regularly inspected.



City of Signal Hill  
**GENERAL PLAN**  
Safety Element



**Legend**

- City of Signal Hill Boundary
- Reservoir Location
- Zone X Flood Risk

Note: All areas outside of Zone X are unzoned. There are no special flood hazard areas within Signal Hill.

Figure 8  
**Flood Hazards**

## D. Oilfield Hazards

### Oil Leaks

The risk of a significant oil leak in Signal Hill is low. This is in part because upward pressure in the Signal Hill oilfield is too low to rise to the surface through wells on its own. Water must be injected to increase oilfield pressure; without active pumping, liquids stop moving and the well ceases operation. In cases where a well is located near development, a “float switch” may be required to be placed at each well to shut off the flow of liquid if deemed necessary by the city inspector. In addition, in the event of a major incident such as an earthquake, a single switch can shut down all SHPI pumping operations in the area. The approximate locations of active wells are mapped on [Figure 9](#).

### Pipelines

Three types of pipelines service the oil industry in Signal Hill: one type carries a combination of water and oil, the second type carries natural gas and the third type carries refined fuel products to and from oil refineries in the region (for example, Carson, Wilmington, Torrance) to the two tank farms in the City and the Long Beach Airport (these pipelines are shown on [Figure 9](#) as “Hazardous Liquid Pipelines”).

SHPI has pipelines that run underneath the streets, throughout the City. The pipelines are used to transport water, crude oil, and produced natural gas from the wells to a central processing facility. Wells operated by SHPI are connected to two pipelines: one carries a combination of water and oil and the second carries the relatively small amount of natural gas that is extracted with the water/oil mix from wells. Some natural gas is consumed by gas turbine electric generators operated by SHPI which supports their operations. The additional gas is sold to Long Beach Gas & Oil Department (LBGO).

The pipelines used to transport produced natural gas from oil and gas operations are operated at negative pressure at low flow rates. The produced natural gas contains a small amount of crude oil which builds up in the pipeline. There are “clean outs” (piping that connects back to the surface) with lids and valves at strategic locations on the natural gas pipeline (typically in streets). A special truck called a “vacuum truck” regularly goes to the clean outs and uses vacuum pressure to suck the residual crude oil out of the produced natural gas pipeline. This routine maintenance procedure is part of on-going work done. SHPI

also conducts mechanical integrity tests on all of its pipelines on a regularly scheduled basis to ensure their strength and safety.

The pipelines used to transport oil from oil and gas operations are required to comply with the provisions of federal and state law.<sup>12</sup> These regulations establish minimum requirements in the following areas of concern: 1) annual, accident, and safety-related condition reporting; 2) design requirements; 3) construction; 4) pressure testing; 5) operations and maintenance; 6) qualification of pipeline personnel; and 7) corrosion control. Inspection, testing, and investigation of pipelines are conducted by the Office of the State Fire Marshal's Pipeline Safety Division.

Oil and gas pipelines from oilfield operations are not the direct responsibility of the City of Signal Hill. Prior to the construction of public works projects or private development, maps are reviewed to determine if pipelines may be located under the project site. Pipeline locations may also be determined by contacting Underground Service Alert, which will send out staff to mark pipeline locations before excavations occur.

## Processing Facilities

There are two processing facilities in Signal Hill (see **Figure 9**) liquids pumped from oil wells are transported via pipeline and collected at these facilities. At these facilities, the water/oil mix is broken down into its constituent parts. Approximately 97 percent of the liquid pumped from Signal Hill wells is salt water, with the remaining 3 percent mostly crude oil. The salt water is pressurized and sent to water injection wells, where it is reinjected into the oilfield. The crude oil is sent via pipeline from the processing facility to refineries throughout Southern California. There are no refineries in the City of Signal Hill. The risk of fire at the central processing facilities is very low due to the low concentration of oil in the liquid mix.

## Refined Petroleum Tank Farms

Two tank farms (also sometimes called an oil depot or terminal) for refined petroleum product remain in operation within Signal Hill, as shown on **Figure 9**. The tank farms store petroleum products (after

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<sup>12</sup> Part 195 (Transportation of Hazardous Liquids by Pipeline) of Title 49 of the Code of Federal Regulations and Section 31010 et seq. of the California Government Code (California Pipeline Safety Act).

they have been refined at refineries outside of the city) until they are transported to end users or another storage facility. There is no processing or other transformation on-site, however minor blending, addition of additives and distribution can be conducted at the sites as it is not considered major manufacturing. The tank farms are adjacent to each other and located near the City's eastern boundary. The larger of the two tank farms is the Tesoro Refining and Marketing Company, at 2350 Obispo which consists of 19 storage tanks with a total maximum design capacity of 1,119,500 barrels. Seven of the tanks were installed in 1958, and the remaining 12 in 1980. The smaller Shell Oil Products tank farm is supplied by direct pipeline from the companies Carson terminal, the tank farm is located east of the Tesoro facility at 2457 Redondo and includes tanks with a total capacity of 61,000 barrels. Employees at these facilities conduct daily visual inspections of storage tanks and other site facilities. Internal inspections of tanks are conducted periodically, when tanks are empty and open. Facility inspections are also carried out by the local Certified Unified Program Agency (CUPA), an entity which must be approved by the California Environmental Protection Agency. The CUPA for Signal Hill is the LACoFD Health Hazardous Materials Division.



City of Signal Hill  
**GENERAL PLAN**  
Safety Element

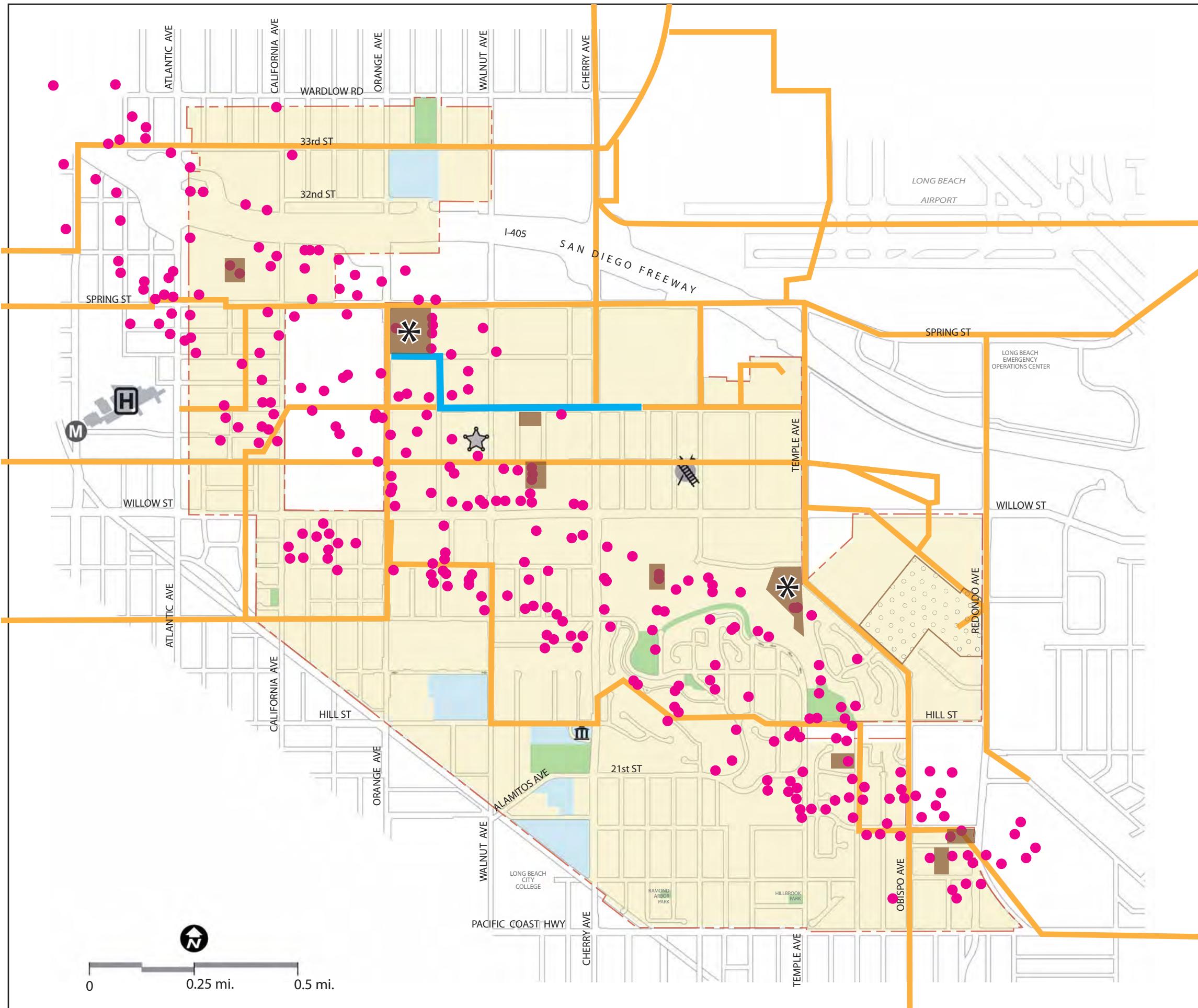


Figure 9  
**Active Oil & Gas Facilities**

## **Groundwater Quality**

Groudwater quality can be affected by various activities including oilfield operations, spills from commercial and industrial facilities and leaks from underground storage tanks if they are not managed properly. The City's water quality consultant, Flow Science, Inc., conducted a groundwater quality analysis to evaluate the potential impacts of oilfield operations on groundwater quality in the Signal Hill-Long Beach area. Flow Science reviewed information on subsurface geology, including the locations of drinking water aquifers and hydrocarbon production zones. The report found that in the Signal Hill area, drinking water aquifers typically occur well above hydrocarbon zones and the aquifers are generally separated by layers of low permeability. In addition, oil/gas wells are constructed with solid casings that extend through drinking water aquifers; oil/gas wells are not screened or perforated in drinking water zones.

In addition, a cursory analysis of the oil/gas recovery technique used in the Signal Hill area called waterflood was also conducted. DOGGR establishes limits and monitoring requirements for waterflood operations throughout California. DOGGR requires that injection pressures in waterflood operations be maintained below the fracture pressure of the formation and DOGGR requires pressure levels be confirmed in the field.

The report concludes that subsurface oilfield operations within the Signal Hill-Long Beach area to date have had no widespread significant impact on the water quality within overlying drinking water aquifers in spite of the fact that many abandoned wells within the Long Beach oil and gas field (the Field) lack an adequate plug at the base of fresh water. A copy of the February 24, 2014 Impacts of Oilfield Operations on Groundwater Quality in Signal Hill-Long Beach Area study is on file with the Community Development Department.

## **Soil Contamination**

Petroleum hydrocarbons are the principal components of crude oil, therefore the soils around an active, idle or abandoned oil well or previous industrial sites including oilfield processing and manufacturing facilities may have hydrocarbons in the soil.

If DOGGR or City inspectors determine that contaminated soil is likely to be present on the project site, a soils investigation by a qualified soils engineer is required. In addition, a Human Health Risk

Assessment (HHRA) may be required as a condition of approval for a development project. A HHRA must follow the guidance in the Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment* guidance manual, along with the guidance of other manuals as needed. Human Health Risk Assessments are submitted to the State Office of Environmental Health Hazard Assessment for scientific validity.

For construction purposes, the property owners should submit a soils management plan to provide guidance to building contractors in the event that discolored or odiferous soils are discovered during onsite excavation and grading activities.

## Methane

Methane is a colorless, odorless gas, is lighter than air and consequently travels in the subsurface along the path of least resistance until released into the atmosphere. Methane is generated from oil production and from microbial degradation of waste in municipal landfills and animal waste/sewage. Methane is a known asphyxiate and is explosive when three conditions are met: (1) it has accumulated in a confined space, (2) it is under pressure in the confined space, and (3) an ignition source is present.

The City has no record of methane or fluids leaking from abandoned or re-abandoned wells. However, all properties in the City, whether or not they contain abandoned wells, shall be tested for methane gas prior to issuance of construction or development permits unless otherwise approved by the Oil Services Coordinator. Methane Assessments are conducted per City of LADBS “Site Testing Standards for Methane” (P/BC 2002-101, November 30, 2004) using field instruments to measure methane, pressure and other fixed gases. The concentrations of methane detected and the measured pressure in the subsurface dictate the type of mitigation system warranted.

Methane Mitigation systems range from Vapor Barrier, Hardscape and Landscape Treatments, Passive Methane Mitigation System, and Modified Active Methane System. These may include, for example, venting systems, impervious foundation membranes, perforated pipe collection systems, and gas detection systems. Methane systems are then plan checked and installed during construction.

## **Development of Properties of Abandoned Oil Wells**

DOGGR states the following significant and potentially dangerous issues related to development near abandoned oil wells:

“The property owner, developer, and local permitting agency should be aware of, and fully understand, the following significant and potentially dangerous issues associated with development near oil or gas wells:

- 1) The property owner is always responsible for providing access to any well located on the property, if re-abandonment becomes necessary. This means the property owner is responsible for removing any structure or obstacle that prevents or impedes access to a well. This includes, but is not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, and decking. The DOGGR is also not responsible for the rebuilding or replacing of any structure or obstacle that needs to be removed to gain access to a well. According to Section 3255 of the Public Resources Code, the DOGGR may order the re-abandonment of any well that poses a danger to life, health, or natural resources.
- 2) There is no guarantees that wells properly abandoned to current DOGGR standards will not start leaking oil, gas, and/or water after abandonment. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thorough the well was plugged and abandoned. DOGGR acknowledges wells that are abandoned to current standards have a lower probability of leaking oil, gas, and/or water after abandonment, but makes no guarantees about the abandonment.”

When a proposal for development (new construction or addition) is presented to the Community Development Department, City staff review DOGGR maps to determine if any active, idle or abandoned oil wells are located within or adjacent to the subject property. If abandoned oil wells appear to be in the area of development, the property is subject to SHMC Chapter 16.24 Development Standards for Properties Containing Abandoned Wells. The steps needed prior to development are outlined below:

- **Step 1- Well Discovery.** First, the precise location of the well must be determined through on-site excavation, prior to excavation a well discovery permit is issued by the City to ensure the site is monitored and secured.

■ **Step 2- Leak Test.** Once the well is located, it is uncovered and examined for gas and oil leakage. A leak testing permit shall be issued by the Oil Services Coordinator, a leak test shall be completed utilizing a "GT-43" gas detection meter, or one of comparable quality approved in advance by the Oil Services Coordinator, and shall be conducted by a state licensed geotechnical or civil engineer or state registered environmental assessor, class II, or other as determined necessary by the Oil Services Coordinator. The methane gas leak test is conducted around the perimeter of the interior and exterior surface plugs and across the face of the visible surface plugs of the visible well casing(s). A leak test report shall be prepared by a state licensed geotechnical or civil engineer or state registered environmental assessor, class II, and shall be submitted to the city for review and approval by the Oil Services Coordinator. The greatest detected measured concentrations of methane for the interior and exterior of each visible well casing shall be included in the report.

- A well shall be considered leaking if the leak test report indicates the meter read is greater than 500 parts per million. If a well is found to be leaking they shall be abandoned pursuant to Sections 16.23.010 and 16.23.020.
- A well shall not be considered leaking if the leak test report indicated the meter read is less than 500 parts per million. If a well is not leaking, vent risers and vent cones shall be installed to provide a subsurface path of least resistance for methane until released into the atmosphere. Cone and riser materials, design and installation shall be observed and inspected and approved by the Oil Services Coordinator and shall be in compliance with the recommendations contained in the leak test report.

Following all testing and inspection, the test area shall be returned to its previous state and fencing may be required around the area, or the entire site, to the satisfaction of the Oil Services Coordinator. In addition, a licensed survey must be submitted to show the location of the well on the property to ascertain the location and document the depth of the well surface plate from the existing grade, or in the case of pending new development, the proposed depth. This is to provide more complete information about the well on the property.

■ **Step 3-Well Access Exhibit.** Once the wells are located and a survey is created the developer shall create a well access exhibit that shows the locations of the abandoned oil well with a fully dimensioned site plan overlaid on top of the survey. The developer is responsible for the site

plan design and choosing whether to maintain rig access to the well, by not building over, or in close proximity to the well or building over or within close proximity of the well. Each abandoned well shall be marked on the exhibit as one of the following: 1. "Access provided" for wells meeting the close proximity standard, or not proposed to be built over. 2. "No access & methane mitigation required" for wells with improvements proposed over, or in close proximity to the well.

- **Step 4 Well Abandonment Report.** A well abandonment report shall be required for all abandoned wells marked as "no access & methane mitigation required" on the well access exhibit and shall be submitted to the Oil Services Coordinator for review. The report is to compile all of the information that is known for the well in one place, for example the well survey, leak test, DOGGR well bore data. The most important part of the report is the equivalency standard assessment report prepared by the applicant's registered petroleum engineer, registered petroleum geologist, or a professional with the equivalent of these registrations for review by the city's Petroleum Engineer. The assessment shall state whether the well meets, or does not meet, the City's equivalency standard pursuant to Section 16.24.070. The written narrative and wellbore diagram should therefore contain all relative facts (and assumptions) about the plugs to allow the developer and the City to reach conclusions on the adequacy of the plugs. The city's consulting petroleum engineer / geologist will determine if these conditions have been met (the abandonment is adequate to prevent hydrocarbons from reaching the surface via said well).
- **Step 5- Well Evaluation.** The primary focus of the Equivalency Standard (ES) is on the cement plugs set in the well during the course of the abandonment operations. The standard was developed by the City's Petroleum Engineer, Tom Walker of Evans & Walker, following extensive analysis of drilling and historic well abandonments and re-abandonments in the Field. The purpose of the standard is to establish a basis for the City's determination to allow development over and in close proximity to abandoned wells. The overarching goal of the standard is to insure that the integrity of the abandonment is sufficient to protect the public health, safety and welfare by preventing hydrocarbons from reaching the surface. In summary, the Equivalency Standard requires three cement plugs at three levels:
  - Last hydrocarbon producing zone
  - Base of fresh water zone

- Surface Plug

A copy of the October 7, 2014 Well Abandonment Equivalency Standard study is on file with the Community Development Department.

- **Step 6- Covenants, Conditions and Restrictions (CC&Rs).** Prior to issuance of any certificate of occupancy for developments constructed over abandoned wells, or for abandoned wells marked “no access,” the property owner shall record a declaration of covenants, conditions and restrictions (CC&Rs), in a form subject to the review and approval of the City Attorney. This is to ensure that present and future property owners are aware of 1) the wells located on the property, and 2) significant and potentially dangerous issues associated with development near oil or gas wells. The CC&Rs are recorded to the property to put future owners and occupants on notice of the following: the existence of abandoned wells on the site; that the wells within the area of development have been leak tested and found not to leak; description of any methane mitigation measures employed; disclosure that access to these wells has been provided to address the fact that they may leak in the future causing potential harm; acknowledgment that the state may order the re-abandonment of any well should it leak in the future; acknowledgment that the state does not recommend building over wells; and releasing and indemnifying the city for issuing project permits.

## E. Other Hazards

### Hazardous Material Generators

Various industrial uses in Signal Hill use or produce materials which may be deemed hazardous by the state and federal governments. Regulation of hazardous wastes is provided on the federal, state and local levels.

The U.S. Environmental Protection Agency (EPA) and the California Department of Toxic Substances Control have developed and continue to update lists of hazardous waste subject to regulation. The South Coast Air Quality Management District (SCAQMD) works with the California Air Resources Board (CARB) and is responsible for developing and implementing rules and regulations regarding air toxins on a local level. The SCAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines.

Hazardous waste management plans are implemented by jurisdictions across California. These plans assure adequate treatment and disposal capacity is available to manage the hazardous wastes generated within each jurisdiction. In 1988, Los Angeles County adopted the Los Angeles County Hazardous Waste Management Plan, which was subsequently approved by the State Department of Health Services. The Los Angeles County Hazardous Waste Management Plan provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Los Angeles County. In addition, the Plan discusses hazardous waste issues, and analyzes current and future waste generation within the region.

Senate Bill 1082 (1993) established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program consolidates, coordinates, and makes consistent six hazardous materials and hazardous waste program elements. The Unified Program is implemented by the local CUPA. The LACoFD provides inspections and emergency response for facilities handling hazardous materials. They also evaluate Risk Management Plans prepared to minimize the risk of accidental releases.

Underground storage tanks, such as those commonly located below gas stations, are regulated by the Los Angeles County Department of Public Works, Environmental Programs Division. The Environmental Programs Division maintains the Underground Storage Tank Program, which has the goal of protecting the public, the environment, and storage tank owners/operators by ensuring that tank facilities are permitted, designed, installed, operated and eventually closed in compliance with local, state, and federal requirements.

## Natural Gas Utility Pipelines

Natural gas pipelines service residential, commercial, and industrial uses throughout the city. Signal Hill is served by Long Beach Gas & Oil (LBGO), a municipal gas utility owned and operated by the City of Long Beach. LBGO services over 500,000 residents and businesses in Long Beach and Signal Hill, and maintains over 900 miles of natural gas main pipelines. No major natural gas explosions have occurred in Long Beach since LBGO's founding in 1924. In order to maintain safe service, approximately \$8 million is expended annually to implement a long-range pipeline replacement plan. In the first eight months of 2010, LBGO replaced about 70,000 feet of pipeline, including 52,000 feet of pipelines constructed before 1950. Most gas pipelines in Signal Hill are small distribution lines, which provide

natural gas directly to individual homes and businesses. However, there is one larger gas transmission line within the city, running mostly below 28<sup>th</sup> Street (see **Figure 9**).

As required by federal regulations, LBGO continually monitors its pipelines for leakage, with personnel conducting walking surveys along the full length of the pipeline system with sensitive gas detection equipment. Leak surveys are conducted annually in business districts and every five years in residential areas. Depending on the magnitude of identified leaks, the damaged pipe is repaired or the pipeline section is completely replaced. The federal Department of Transportation's Office of Pipeline Safety conducts periodic audits of LBGO's pipeline operation and maintenance practices. LBGO has met all standards for leak survey, repairing all leaks according to federal safety standards and procedures. LBGO also maintains emergency service contact numbers and work crews on call 24 hours per day to investigate potential leaks.

## Tsunami, Seiche, and Dam Failure

Tsunamis are unusually large sea waves produced by submarine earth movements or volcanic eruptions. They have the potential to impact coastlines and low-lying areas inland from the coast. Tsunami inundation mapping for California's coastal counties, including Los Angeles, was prepared in 2009 through a collaboration of the California Emergency Management Agency, the California Geological Survey, and the University of Southern California.<sup>13</sup> Mapping for the Long Beach Quadrangle shows that tsunamis are not expected to impact the City of Signal Hill. Much of the coast of Long Beach is protected by a high bluff which prevents tsunami impacts beyond the beach. The area nearest Signal Hill that could be impacted by a tsunami is the Colorado Lagoon area in Long Beach, located south of 7<sup>th</sup> Street and east of Ximeno Avenue, 1.5 miles southeast of Signal Hill's boundary.

Similar to a tsunami, seiche is the sudden oscillation of waters in an enclosed water body, such as a lake, rather than on the sea. There are no such enclosed water bodies in the vicinity of Signal Hill, and there is therefore no risk from seiche.

Dam failure can result in large-scale flooding of downstream areas. There are no dams in the Signal Hill area which could cause flooding in the City.

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<sup>13</sup> Available at [www.consrv.ca.gov/cgs/geologic\\_hazards/Tsunami/Inundation\\_Maps/Pages/Statewide\\_Maps.aspx](http://www.consrv.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Pages/Statewide_Maps.aspx)

## IV. GOALS AND POLICIES

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The goals and policies of this Safety Element fall into three major categories: prevention, preparation, and recovery. Goal 1 provides for *prevention*, which includes actions that should be taken to avert to the greatest degree feasible potential disasters. Where prevention is not feasible, Goal 2 provides for *preparation*, which involves taking steps to minimize impacts from disasters that are cannot be prevented. Finally, Goal 3 provides for *recovery*, or the rapid and effective restoration of services, infrastructure, and normal citywide operations following a major event.

### **Goal 1: PREVENTION: Strive to prevent man-made disasters and minimize the potential for natural disasters to impact the community.**

- Policy 1.a: Maintain a high level of interjurisdictional cooperation and communication on emergency planning and management.
- Policy 1.b: Design future development located near water storage facilities and below the slope of the Hill to minimize the possibility of damage from flooding or a water storage facility leak or rupture.
- Policy 1.c: Regulate the location, use, storage, and transportation of hazardous and toxic materials and protect the public from these hazards.
- Policy 1.d: Maintain, revise, and enforce appropriate standards and codes to minimize seismic and geologic risks.
- Policy 1.e: Encourage the maintenance or improvement of buildings' structural integrity to protect residents and preserve communities.
- Policy 1.f: Locate, staff, and equip fire stations to meet established response times. Response time objectives are to be based on national standards.
- Policy 1.g: Regulate the amount and type of new development in areas susceptible to fire hazards.

- Policy 1.h: As development and population growth occurs, review service levels and adjust service accordingly to meet the demands of continued growth and development, tourism, and other factors which could change fire-rescue service needs.
- Policy 1.i: Maintain communications with the Los Angeles County Fire Department to ensure that the department is continually equipped and trained to respond to fires and other emergencies.
- Policy 1.j: Undertake preventive measures both for catastrophic events and for more frequent incidents such as structural fires and localized flooding.
- Policy 1.k: Regulate development in Alquist-Priolo Earthquake Fault Zones consistent with levels of acceptable risk. Require the submission of geologic and seismic reports, as well as soils engineering reports, in relation to applications for land development permits whenever seismic or geologic problems are suspected.
- Policy 1.l: Recognize the need for greater protection and safety of critical use facilities through careful site selection and comprehensive geotechnical evaluation that considers seismic and other geotechnical hazards.
- Policy 1.m: Update the local Hazard Mitigation Plan every five years and evaluate the mitigation plan annually to determine the effectiveness of programs and to reflect changes in land development or programs that may affect mitigation priorities.

## **Goal 2: PREPARATION: Take necessary steps to allow for effective responses to disasters.**

- Policy 2.a: Maintain an effective Emergency Operations Plan and other emergency preparedness plans and programs, as necessary.
- Policy 2.b: Ensure operational readiness of the City's EOC.
- Policy 2.c: Adopt, monitor, and maintain service delivery objectives based on time standards for all fire, rescue and emergency response services.

- Policy 2.d: Coordinate with healthcare providers so that the expansion or construction of new healthcare facilities addresses General Plan and community plan goals.
- Policy 2.e: Coordinate with other area jurisdictions and local community groups and businesses to execute a variety of exercises to test operational and emergency plans and identify potential deficiencies in services that would occur during a disaster.
- Policy 2.f: Address any deficiencies identified during emergency operations testing exercises by amending the City's Emergency Operations Plan accordingly.

**Goal 3: RECOVERY: Plan for efficient and rapid recovery from disasters.**

- Policy 3.a: To the maximum extent possible, assist in the orderly and efficient reconstruction of Signal Hill following a major disaster.
- Policy 3.b: Ensure that disaster recovery efforts involving the disposal of materials adhere to federal, state and City regulations when feasible.
- Policy 3.c: To the extent possible, ensure that appropriate and effective action is taken to safeguard life and property during and immediately after emergencies, and assist in returning their lives and businesses to normal following a major event.

# V. IMPLEMENTATION PROGRAM

This section provides a coordinated set of action plans and programs that serve to implement the goals and policies described in Section IV.

TABLE 9 Implementation Program

	Action Plans/Policies	Corresponding Goal/Policy
1	Continue to adopt the most-recent California Building, Electrical, Fire, Mechanical, Plumbing, and Residential Codes, as they are updated.	1.d / 1.e / 1.k / 1.l
2	Conduct annual reviews and updates, as necessary, of the Emergency Operations Plan.	1.a / 1.j / 2.f
3	Require geologic engineering and/or soils site investigations on all potential development sites located within Alquist-Priolo Earthquake Fault Zones. Such investigations are to be completed prior to issuance of a building permit.	1.d / 1.k / 1.l
4	Increase public awareness by developing an education program for residents and businesses on emergency preparedness.	1.j / 2.e / 3.c
5	Maintain the City's agreement with the Los Angeles County Fire Department for fire protection services and periodically review the adequacy of fire protection services.	1.a / 1.f / 1.i / 1.j
6	Continue to require Fire Department approval prior to project plan approval and completion.	1.a / 1.f / 1.g / 1.i / 1.j
7	With the assistance of the Fire Department, encourage employers to establish training programs regarding fire prevention, control, and evacuation.	1.a / 1.f / 1.j / 2.e
8	Coordinate with the Fire Department in their review of minimum fire flows and availability and distribution requirements for water in new developments.	1.a / 1.f / 1.g / 1.h / 1.i / 2.a
9	Establish procedures for prioritizing services and assistance provided by mutual aid organizations, including the Long Beach Police and Fire Departments, the Los Angeles County Sheriff's Department, and the California Highway Patrol.	1.a / 1.f / 1.h / 1.i / 2.a / 2.b / 2.e / 3.c
10	Increase community awareness of potential crime hazards through public education programs conducted by qualified law enforcement personnel for all members of the community.	1.j / 2.c / 2.e / 3.c
11	Encourage City residents to become active in their community by continuing the support programs such as the Neighborhood Watch program.	1.j / 2.c / 2.e
12	Periodically review and update, as necessary, all law enforcement procedures and services to ensure the protection of public safety and welfare within Signal Hill.	1.h / 1.j / 2.c
13	Perform regular inspections of all water storage facilities located within the City and, if necessary, implement new procedures to ensure the safety of these facilities.	1.b / 1.e
14	Periodically review and update all municipal and building codes regulating the development and maintenance of facilities that extract, process, transport, and store petroleum, natural gas, chemical acid materials, and other potentially hazardous or toxic material.	1.c / 1.g

15	Continue to conduct safety inspections of hazardous and toxic materials facilities and implement, as necessary, any new requirements for the regulation of safety in these facilities.	1.c / 1.j
16	Collaborate with appropriate agencies and industries to define responsibility and cost allocation for repair and cleanup of hazardous, dangerous, toxic, and other spilled materials.	1.c
17	Require the annual updating of the City's inventory of all facilities, pipelines, and transport routes involved with hazard and toxic material activities.	1.c
18	Periodically update local standards, and support strengthening of state and federal standards concerning the transportation of hazardous and toxic materials within Signal Hill.	1.c
19	Specify those roadways that are designated as transportation routes for hazardous and toxic materials within Signal Hill.	1.c
20	Develop educational programs for public safety, public works, and inspection personnel identifying the types of hazardous materials located within the City and/or proper handling procedures in the event of a hazardous or toxic material emergency.	1.c / 1.j / 2.e / 3.b / 3.c
21	Maintain a capability for dealing with hazardous or toxic materials emergencies, and seek funding for such a capability.	1.c / 3.b
22	Maintain and revise, as necessary, the City's Emergency Operations Plan, to ensure the optimal safety and welfare of Signal Hill residents.	1.j / 2.a / 2.e / 2.f / 3.c
23	Continue regular exercises of Emergency Operations Plan procedures by City personnel in a simulated setting.	1.j / 2.a / 2.b / 2.f / 3.c
24	Develop an agreement with appropriate emergency medical service providers to serve Signal Hill's residents and workers in the event of a disaster.	1.j / 2.b / 2.d
25	Maintain an evacuation plan providing routes and procedures. Update the plan as necessary to account for changes in the roadway network, new development, and new hazards.	1.j / 2.a / 3.c
26	Develop an educational program aimed at informing the public of proper emergency response procedures.	1.j / 2.e / 3.c
27	Periodically review the coordinated efforts of all emergency response agencies to ensure the availability of services and efficiency of communications.	1.a / 1.j / 3.c
28	Prepare a recovery plan for reconstruction of essential services and facilities in the event of an emergency; develop resources and available sources of funding.	1.j / 2.a / 2.d / 3.a / 3.b / 3.c
29	Maintain an emergency operations center in accordance with the City's Emergency Operations Plan.	1.j / 2.a / 2.b / 3.c
30	Continue to train City employees in emergency response and management skills.	1.j / 2.a / 2.b / 2.e / 3.c
31	Update the local Hazard Mitigation Plan every five years and evaluate the mitigation plan annually to determine the effectiveness of programs and to reflect changes in land development or programs that may affect mitigation priorities.	1.m

## VI. RESOURCE DIRECTORY

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### California Department of Forestry and Fire Protection (CAL FIRE)

[www.fire.ca.gov](http://www.fire.ca.gov)

Applicable Activities: Wildland fire hazard mapping

### California Department of Conservation

#### *California Geological Survey (CGS)*

[www.conservation.ca.gov/cgs](http://www.conservation.ca.gov/cgs)

Applicable Activities: Seismic hazards mapping

#### *Division of Oil, Gas, and Geothermal Resources (DOGGR)*

[www.conservation.ca.gov/dog](http://www.conservation.ca.gov/dog)

Applicable Activities: Oil and gas well permitting, testing, safety inspections, and abandonment

### California Office of Emergency Services (Cal OES)

[www.oes.ca.gov](http://www.oes.ca.gov)

Applicable Activities: Emergency preparedness and response, tsunami inundation mapping

### Long Beach Gas & Oil Department (LBGO)

[www.longbeach.gov/lbgo](http://www.longbeach.gov/lbgo)

Applicable Activities: Natural gas pipelines and services

### Los Angeles County Fire Department (LACoFD)

[www.fire.lacounty.gov](http://www.fire.lacounty.gov)

Applicable Activities: Fire protection, building permit review

### Los Angeles County Office of Emergency Management

[www.lacoa.org](http://www.lacoa.org)

Applicable Activities: Countywide emergency organization and preparedness

### U.S. Geological Survey (USGS)

[www.usgs.gov](http://www.usgs.gov)

Applicable Activities: Earthquake records and statistics

### U.S. Department of Transportation

#### *Office of Pipeline Safety*

[www.phmsa.dot.gov/pipeline](http://www.phmsa.dot.gov/pipeline)

Applicable Activities: Inspection of federally-regulated pipelines

## VII. MAPPING REFERENCES

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## **APPENDIX A- HAZARD MITIGATION PLAN**

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October 3, 2016

# Hazard Mitigation Plan





# Credits

## Special Thanks

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## Acknowledgements

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- ✓ Tina L. Hansen, Vice Mayor
- ✓ Larry Forester, Council Member
- ✓ Michael J. Noll, Council Member
- ✓ Edward H.J. Wilson, Council Member

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## Mapping

The maps in this plan were provided by the City of Signal Hill, County of Los Angeles, Federal Emergency Management Agency (FEMA), or were acquired from public Internet sources. Care was taken in the creation of the maps contained in this Plan, however they are provided "as is". The City of Signal Hill cannot accept any responsibility for any errors, omissions or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from land surveys may have been used in the creation of these products, in no way does this product represent or constitute a land survey. Users are cautioned to field verify information on this product before making any decisions.

## Mandated Content

In an effort to assist the readers and reviewers of this document, the jurisdiction has inserted "markers" emphasizing mandated content as identified in the Disaster Mitigation Act of 2000 (Public Law – 390). Following is a sample marker:

### \*EXAMPLE\*

#### **Q&A | ELEMENT A: PLANNING PROCESS | A1**

**Q A1:** Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))

**A:**



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# Part I: PLANNING PROCESS

## Introduction

The Hazard Mitigation Plan (Mitigation Plan) was prepared in response to Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 (also known as Public Law 106-390) requires state and local governments to prepare mitigation plans to document their mitigation planning process, and identify hazards, potential losses, mitigation needs, goals, and strategies. This type of planning supplements the City's comprehensive land use planning and emergency management planning programs. This document is a federally mandated update to the City of Signal Hill 2012 Hazard Mitigation Plan and ensures continuing eligibility for Hazard Mitigation Grant Program (HMGP) funding.

DMA 2000 was designed to establish a national program for pre-disaster mitigation, streamline disaster relief at the federal and state levels, and control federal disaster assistance costs. Congress believed these requirements would produce the following benefits:

- ✓ Reduce loss of life and property, human suffering, economic disruption, and disaster costs.
- ✓ Prioritize hazard mitigation at the local level with increased emphasis on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical facilities/services survive a disaster.
- ✓ Promote education and economic incentives to form community-based partnerships and leverage non-federal resources to commit to and implement long-term hazard mitigation activities.

The following FEMA definitions are used throughout this plan (Source: FEMA, 2002, *Getting Started, Building Support for Mitigation Planning*, FEMA 386-1):

Hazard Mitigation – “Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards”.

Planning – “The act or process of making or carrying out plans; specifically, the establishment of goals, policies, and procedures for a social or economic unit.”

## Planning Approach

The four-step planning approach outlined in the FEMA publication, *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies* (FEMA 386-3) was used to develop this plan:

- ✓ **Develop mitigation goals and objectives** - The risk assessment (hazard characteristics, inventory, and findings), along with municipal policy documents, were utilized to develop mitigation goals and objectives.
- ✓ **Identify and prioritize mitigation actions** - Based on the risk assessment, goals and objectives, existing literature/resources, and input from participating entities, mitigation activities were identified for each hazard. Activities were 1) qualitatively evaluated against



the goals and objectives, and other criteria; 2) identified as high, medium, or low priority; and 3) presented in a series of hazard-specific tables.

- ✓ **Prepare implementation strategy** - Generally, high priority activities are recommended for implementation first. However, based on community needs and goals, project costs, and available funding, some medium or low priority activities may be implemented before some high priority items.
- ✓ **Document mitigation planning process** - The mitigation planning process is documented throughout this plan.

## Hazard Land Use Policy in California

Planning for hazards should be an integral element of any City's land use planning program. All California cities and counties have General Plans (also known as Comprehensive Plans) and the implementing ordinances that are required to comply with the statewide land use planning regulations.

The continuing challenge faced by local officials and state government is to keep the network of local plans effective in responding to the changing conditions and needs of California's diverse communities, particularly in light of the very active seismic region in which we live.

Planning for hazards requires a thorough understanding of the various hazards facing the City and region as a whole. Additionally, it's important to take an inventory of the structures and contents of various City holdings. These inventories should include the compendium of hazards facing the City, the built environment at risk, the personal property that may be damaged by hazard events and most of all, the people who live in the shadow of these hazards. Such an analysis is found in this hazard mitigation plan.

## State and Federal Partners in Hazard Mitigation

All mitigation is local and the primary responsibility for development and implementation of risk reduction strategies and policies lies with each local jurisdiction. Local jurisdictions, however, are not alone. Partners and resources exist at the regional, state and federal levels. Numerous California state agencies have a role in hazards and hazard mitigation.

Some of the key agencies include:

- ✓ California Office of Emergency Services (Cal OES) is responsible for disaster mitigation, preparedness, response, recovery, and the administration of federal funds after a major disaster declaration;
- ✓ Southern California Earthquake Center (SCEC) gathers information about earthquakes, integrates information on earthquake phenomena, and communicates this to end-users and the general public to increase earthquake awareness, reduce economic losses, and save lives.
- ✓ California Department of Forestry and Fire Protection (CAL FIRE) is responsible for all aspects of wildland fire protection on private and state properties, and administers forest practices regulations, including landslide mitigation, on non-federal lands.
- ✓ California Division of Mines and Geology (DMG) is responsible for geologic hazard characterization, public education, and the development of partnerships aimed at reducing risk.



- ✓ California Division of Water Resources (DWR) plans, designs, constructs, operates, and maintains the State Water Project; regulates dams; provides flood protection and assists in emergency management. It also educates the public, serves local water needs by providing technical assistance
- ✓ FEMA provides hazard mitigation guidance, resource materials, and educational materials to support implementation of the capitalized DMA 2000.
- ✓ United States Census Bureau (USCB) provides demographic data on the populations affected by natural disasters.
- ✓ United States Department of Agriculture (USDA) provides data on matters pertaining to land management.

#### **Q&A | ELEMENT A: PLANNING PROCESS | A3**

**Q:** A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))

**A:** See **Planning Phases Timeline** below.

## **Stakeholders**

A Hazard Mitigation Planning Team (Planning Team) consisting of department representatives from City of Signal Hill staff worked with Emergency Planning Consultants to create the updated Plan. **The Planning Team served as the primary stakeholders throughout the planning process.**

As required by DMA 2000, the Planning Team informed the general public and external agencies (including special districts and adjoining jurisdictions) of the planning process and provided opportunities for input during both the plan writing and review phases. **The general public and external agencies served as secondary stakeholders in the planning process.**

## **Hazard Mitigation Legislation**

### ***Hazard Mitigation Grant Program***

In 1974, Congress enacted the Robert T. Stafford Disaster Relief and Emergency Act, commonly referred to as the Stafford Act. In 1988, Congress established the Hazard Mitigation Grant Program (HMGP) via Section 404 of the Stafford Act. Regulations regarding HMGP implementation based on the DMA 2000 were initially changed by an Interim Final Rule (44 CFR Part 206, Subpart N) published in the Federal Register on February 26, 2002. A second Interim Final Rule was issued on October 1, 2002.

The HMGP helps states and local governments implement long-term hazard mitigation measures for natural hazards by providing federal funding following a federal disaster declaration. Eligible applicants include state and local agencies, Indian tribes or other tribal organizations, and certain nonprofit organizations.

In California, the HMGP is administered by Cal OES. Examples of typical HMGP projects include:

- ✓ Property acquisition and relocation projects



- ✓ Structural retrofitting to minimize damages from earthquake, flood, high wind, wildfire, or other natural hazards
- ✓ Elevation of flood-prone structures
- ✓ Vegetative management programs, such as:
  - Brush control and maintenance
  - Fuel break lines in shrubbery
  - Fire-resistant vegetation in potential wildland fire areas

### *Pre-Disaster Mitigation Program*

The Pre-Disaster Mitigation Program (PDM) was authorized by §203 of the Stafford Act, 42 United States Code, as amended by §102 of the DMA 2000. Funding is provided through the National Pre-Disaster Mitigation Fund to help state and local governments (including tribal governments) implement cost-effective hazard mitigation activities that complement a comprehensive mitigation program.

In Fiscal Year 2009, two types of grants (planning and competitive) were offered under the PDM Program. Planning grants allocate funds to each state for Mitigation Plan development. Competitive grants distribute funds to states, local governments, and federally recognized Indian tribal governments via a competitive application process. FEMA reviews and ranks the submittals based on pre-determined criteria. The minimum eligibility requirements for competitive grants include participation in good standing in the National Flood Insurance Program (NFIP) and a FEMA-approved Mitigation Plan.

(Source: <http://www.fema.gov/fima/pdm.shtm>)

### *Flood Mitigation Assistance Program*

The Flood Mitigation Assistance (FMA) Program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101). Financial support is provided through the National Flood Insurance Fund to help states and communities implement measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP.

Three types of grants are available under FMA: planning, project, and technical assistance. Planning grants are available to states and communities to prepare Flood Mitigation Plans. NFIP-participating communities with approved Flood Mitigation Plans can apply for project grants to implement measures to reduce flood losses. Technical assistance grants in the amount of 10 percent of the project grant are available to the state for program administration. Communities that receive planning and/or project grants must participate in the NFIP. Examples of eligible projects include elevation, acquisition, and relocation of NFIP-insured structures. (Source: <http://www.fema.gov/fima/fma.shtm>)

---

"Floods and hurricanes happen. The hazard itself is not the disaster – it's our habits, it's how we build and live in those areas...that's the disaster."

Craig Fugate,  
FEMA Director

---



## Q&A | ELEMENT C. MITIGATION STRATEGY | C2

**Q:** C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))

**A:** See **NFIP Participation** below.

## National Flood Insurance Program

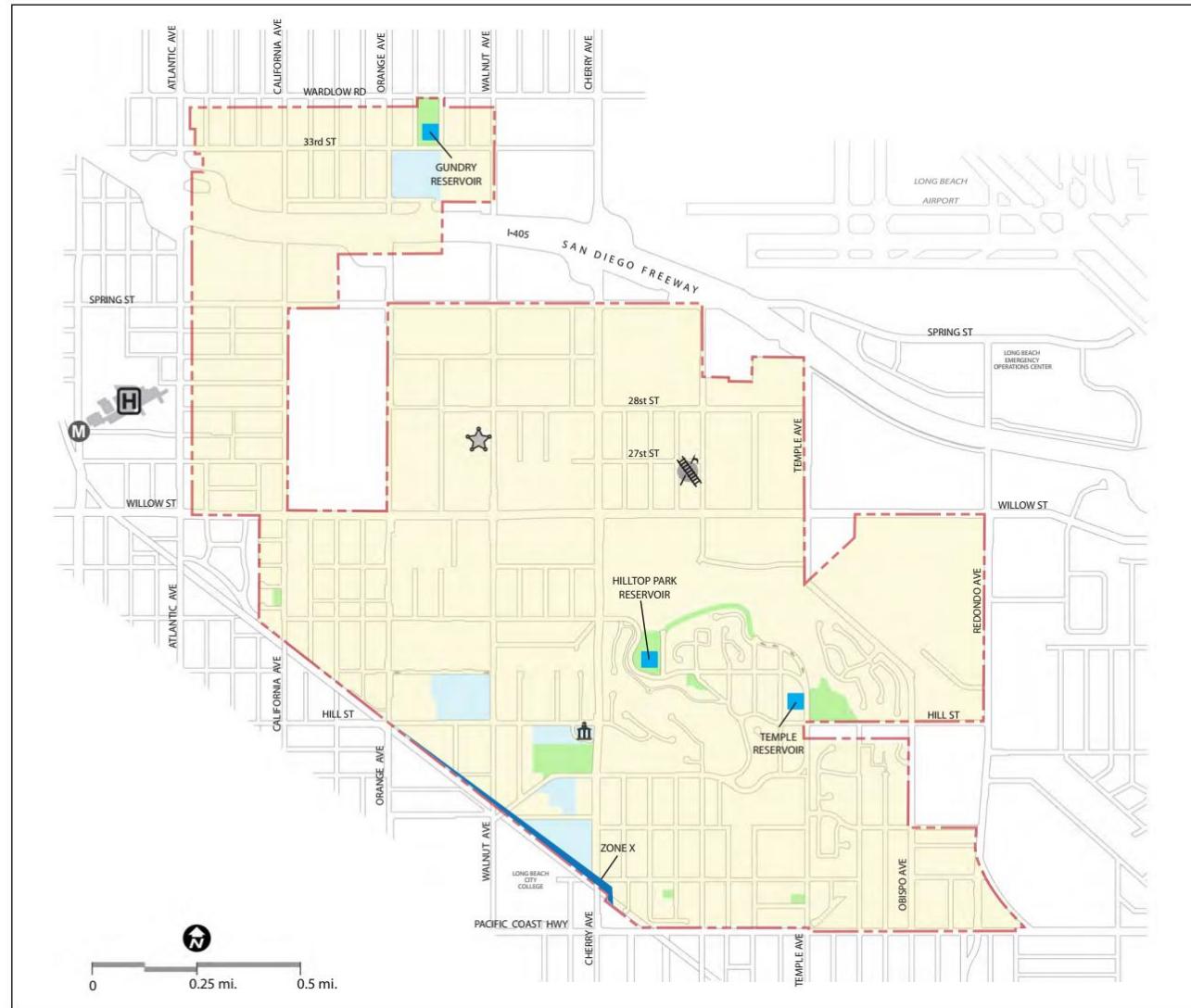
Established in 1968, the NFIP provides federally-backed flood insurance to homeowners, renters, and businesses in communities that adopt and enforce floodplain management ordinances to reduce future flood damage.

### *NFIP Participation*

The City of Signal Hill participates in NFIP and the FEMA FIRM maps for the City of Signal Hill were last updated September 26, 2008. Unfortunately, FEMA flood maps are not entirely accurate. These studies and maps represent flood risk at the point in time when FEMA completed the studies, and does not incorporate planning for floodplain changes in the future due to new development. Although FEMA is considering changing that policy, it is optional for local communities.

According to FEMA, the City of Signal Hill is designated a No Special Flood Hazard Area (NSFHA). A Non-Special Flood Hazard Area (NSFHA) is an area that is in a moderate- to low-risk flood zone (Zones B, C, X Pre- and Post-FIRM). An NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains. According to the City's 2016 General Plan Safety Element, Signal Hill is not subject to flood hazards. Only a small area along the city's southwestern boundary is designated as Zone X on the Federal Emergency Management Agency's Flood Insurance Rate Map, indicating no major flood risk. The remainder of the City is unzoned. Accordingly, it is concluded that there are no special flood hazard areas in the City as shown on **Map: Flood Hazards**.

**Map: Flood Hazards**  
(Source: City of Signal Hill General Plan – Safety Element 2016)



City of Signal Hill  
**GENERAL PLAN**

Safety Element  
October 2010

# DRAFT

## Legend

- - - City of Signal Hill Boundary
- Reservoir Location
- Zone X Flood Risk

Note: All areas outside of Zone X are unzoned. There are no special flood hazard areas within Signal Hill.

Figure 7  
**Flood Hazards**

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B4

**Q:** B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

**A:** See **Repetitive Loss Properties** below.

### *Repetitive Loss Properties*

Repetitive Loss Properties (RLPs) are most susceptible to flood damages; therefore, they have been the focus of flood hazard mitigation programs. Unlike a Countywide program, the Floodplain Management Plan (FMP) for repetitive loss properties involves highly diversified property profiles, drainage issues, and property owner's interest. It also requires public involvement processes unique to each RLP area. The objective of an FMP is to provide specific potential mitigation measures and activities to best address the problems and needs of communities with repetitive loss properties. A repetitive loss property is one for which two or more claims of \$1,000 or more have been paid by the National Flood Insurance Program (NFIP) within any given ten-year period. According to FEMA resources, there are no Repetitive Loss Properties within the City of Signal Hill.

## State and Federal Guidance in Hazard Mitigation

While local jurisdictions have primary responsibility for developing and implementing hazard mitigation strategies, they are not alone. Various state and federal partners and resources can help local agencies with mitigation planning.

The Mitigation Plan was prepared in accordance with the following regulations and guidance documents:

- ✓ DMA 2000 (Public Law 106-390, October 10, 2000)
- ✓ 44 CFR Parts 201 and 206, Mitigation Planning and Hazard Mitigation Grant Program, Interim Final Rule, October 1, 2002
- ✓ 44 CFR Parts 201 and 206, Mitigation Planning and Hazard Mitigation Grant Program, Interim Final Rule, February 26, 2002
- ✓ How-To Guide for Using HAZUS-MH for Risk Assessment, (FEMA 433), February 2004
- ✓ Mitigation Planning “How-to” Series (FEMA 386-1 through 9 available at: <http://www.fema.gov/fima/planhowto.shtm>)
- ✓ Getting Started: Building Support For Mitigation Planning (FEMA 386-1)
- ✓ Understanding Your Risks: Identifying Hazards and Estimating Losses (FEMA 386-2)
- ✓ Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies (FEMA 386-3)
- ✓ Bringing the Plan to Life: Implementing the Mitigation Plan (FEMA 386-4)
- ✓ Using Benefit-Cost Review in Mitigation Planning (FEMA 386-5)
- ✓ Integrating Historic Property and Cultural Resource Considerations into Mitigation Planning (FEMA 386-6)
- ✓ Integrating Manmade Hazards Into Mitigation Planning (FEMA 386-7)
- ✓ Multi-Jurisdictional Mitigation Planning (FEMA 386-8)

- ✓ Using the Mitigation Plan to Prepare Successful Mitigation Projects (FEMA 386-9)
- ✓ State and Local Plan Interim Criteria Under the DMA 2000, July 11, 2002, FEMA
- ✓ Mitigation Planning Workshop For Local Governments-Instructor Guide, July 2002, FEMA
- ✓ Report on Costs and Benefits of Natural Hazard Mitigation, Document #294, FEMA
- ✓ LHMP Development Guide – Appendix A - Resource, Document, and Tool List for Local Mitigation Planning, December 2, 2003, Cal OES
- ✓ Local Mitigation Plan Review Guide (FEMA 2011)
- ✓ Local Mitigation Planning Handbook (FEMA 2013)

## How is the Plan Organized?

The structure of the plan enables the reader to use a section of interest to them and allows the City to review and update sections when new data is available. The ease of incorporating new data into the plan will result in a Mitigation Plan that remains current and relevant.

Following is a description of each section of the plan:

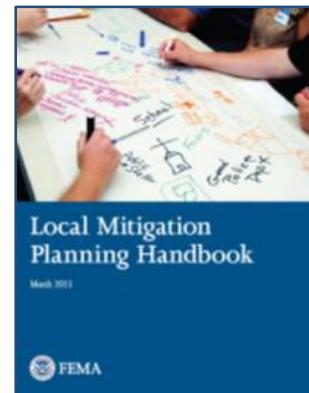
### Part I: Planning Process

#### Introduction

Describes the background and purpose of developing a mitigation plan.

#### Planning Process

Describes the mitigation planning process including: stakeholders and integration of existing data and plans.



### Part II: Risk Assessment

#### Community Profile

Summarizes the history, geography, demographics, and socioeconomic of the City.

#### Risk Assessment

This section provides information on hazard identification, vulnerability and risk associated with hazards in the City.

#### City-Specific Hazard Analysis

Describes the natural hazards posing a significant threat to the City including:

#### Earthquake | Landslide | Windstorm | Drought

Each City-Specific Hazard Analysis includes information on previous occurrences, local conditions, hazard assessment, and local impacts.

### Part III: Mitigation Strategies

#### Mitigation Strategies

Documents the goals, community capabilities, and priority setting methods supporting the Plan. Also highlights the Mitigation Actions Matrix: 1) goals met; 2) identification,



assignment, timing, and funding of mitigation activities; 3) benefit/cost/priorities; 4) plan implementation method; and 5) activity status.

### **Plan Maintenance**

Establishes tools and guidelines for maintaining and implementing the Mitigation Plan.

### **Part IV: Appendix**

The plan appendices are designed to provide users of the Mitigation Plan with additional information to assist them in understanding the contents of the mitigation plan, and potential resources to assist them with implementation.

#### **General Hazard Overviews**

Generalized subject matter information discussing the science and background associated with the identified hazards.

#### **Attachments**

- FEMA Letter of Approval
- City Council Staff Report
- City Council Resolution
- Planning Team sign-in sheets
- Web postings and notices
- References



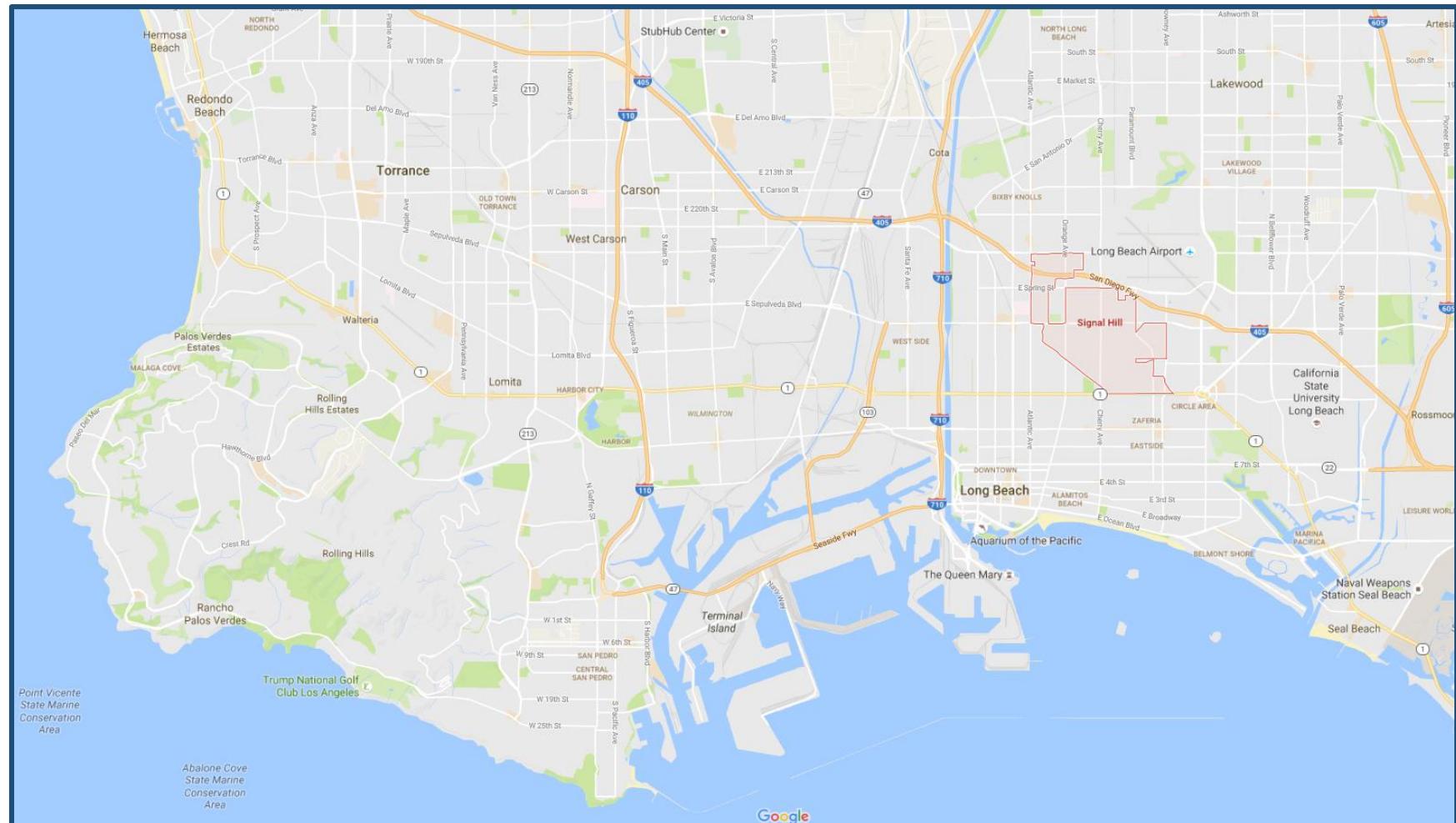
## Plan Adoption and Approval

As per DMA 2000 and supporting Federal regulations, the Mitigation Plan is required to be adopted by the City Council and approved by FEMA. See the **Planning Process Section** for details.

## Who Does the Mitigation Plan Affect?

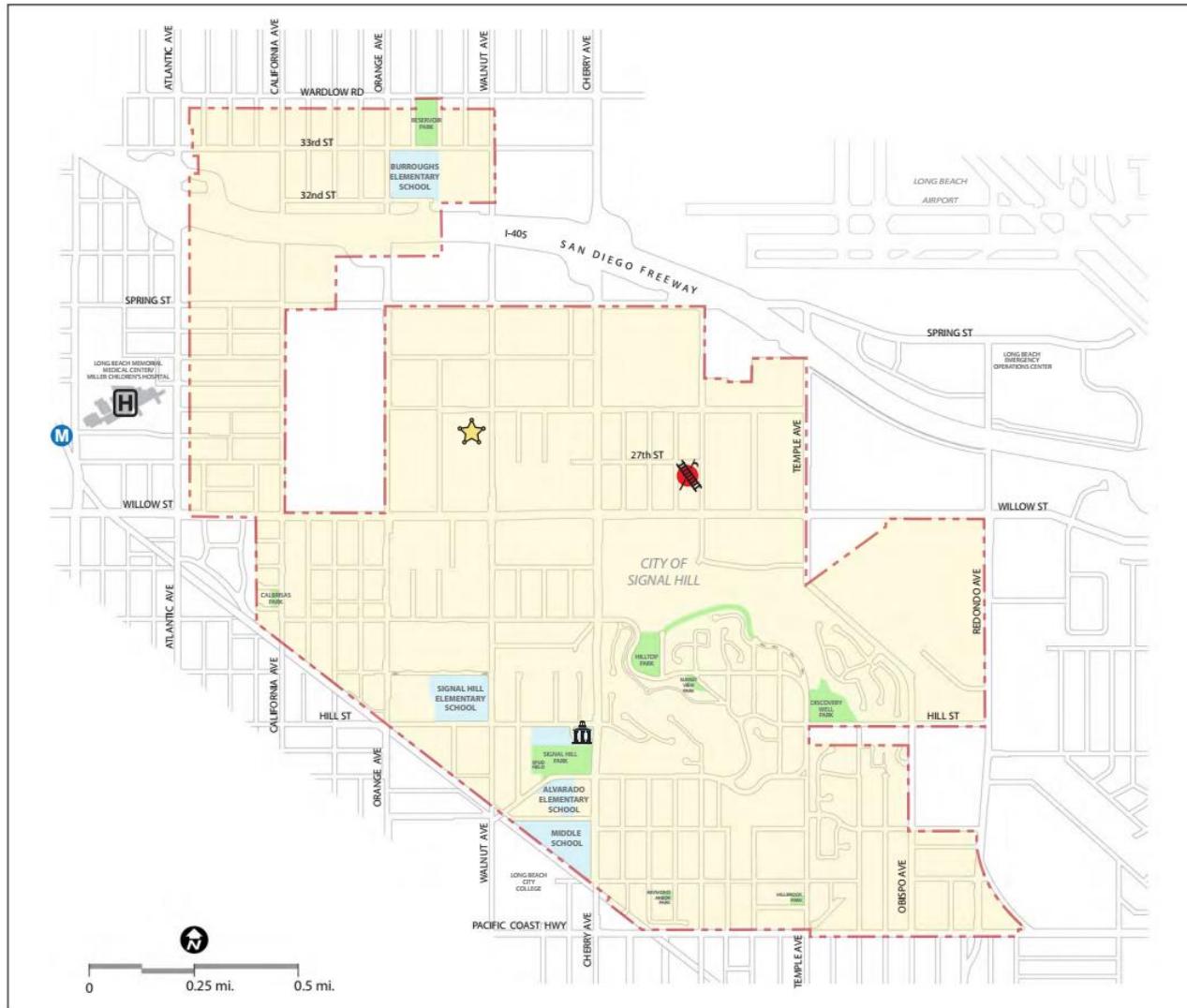
This plan provides a framework for planning for natural hazards. The resources and background information in the plan are applicable City-wide and to City-owned facilities outside of the City boundaries, and the goals and recommendations provide groundwork for local mitigation plans and partnerships. **Map: City of Signal Hill** shows the regional proximity of the City to its adjoining communities.

**Map: City of Signal Hill - Regional**  
**(Source: Google Maps)**





**Map: City of Signal Hill - Local**  
 (Source: City of Signal Hill General Plan – Safety Element 2016)



**City of Signal Hill  
GENERAL PLAN**

Safety Element  
October 2010

- - - City of Signal Hill Boundary
- [Green Box] Parks
- [Light Blue Box] Schools
- [Blue M] Metro Rail Station
- [Hospital H] Hospital
- [Yellow Star] Police Station & Emergency Operations Center
- [Red Fire Truck] Fire Station
- [Civic Center Building] Civic Center



## Planning Process

Throughout the project, the City followed its traditional approach to developing policy documents which included preparation of a First Draft Plan for review by the City's Hazard Mitigation Planning Team who served as the primary stakeholders. Next, following necessary updates, a Second Draft Plan was shared with the general public and external agencies (special districts and adjoining jurisdictions) during the plan writing phase. The general public and external agencies served as the secondary stakeholders. Next, the comments gathered from the secondary stakeholders were incorporated into a Third Draft Plan which was submitted to Cal OES and FEMA along with a request for a conditional approval.

Next, the Planning Team completed amendments to the Plan to reflect mandated input by Cal OES and FEMA. The Fourth Draft Plan was then posted for an additional opportunity for input from the secondary stakeholders. Following the review period, comments gathered were incorporated into a City Council Staff Report and a public notice was placed on the City's website announcing the City Council's public meeting. Following adoption by the City Council, the Final Draft Plan was re-submitted to FEMA with a request for final approval. The planning process described above is portrayed below in a timeline:

### Q&A | ELEMENT A: PLANNING PROCESS | A1

**Q:** A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))

**A:** See **Planning Phases Timeline** below.

### Q&A | ELEMENT A: PLANNING PROCESS | A2

**Q:** A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))

**A:** See **Planning Phases Timeline** below.

### Q&A | ELEMENT A: PLANNING PROCESS | A3

**Q:** A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))

**A:** See **Planning Phases Timeline** below.

### Q&A | ELEMENT E: PLAN ADOPTION | E1

**Q:** E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))

**A:** See **Planning Phases Timeline** below.

Figure: Planning Phases Timeline

PLANNING PHASES TIMELINE				
Plan Writing Phase (First & Second Draft Plan)	Plan Review Phase (Third & Fourth Draft Plan)	Plan Adoption Phase (Fourth Draft Plan)	Plan Approval Phase (Final Draft & Final Plan)	Plan Implementation Phase
<ul style="list-style-type: none"> <li>Planning Team input – research, meetings, writing, review of First Draft Plan</li> <li>Incorporate input from the Planning Team into Second Draft Plan</li> <li>Invite general public and external agencies to review, comment, and contribute to the Second Draft Plan.</li> <li>Incorporate input into the Third Draft Plan</li> </ul>	<ul style="list-style-type: none"> <li>Third Draft Plan sent to Cal OES and FEMA for conditional approval</li> <li>Address any mandated revisions identified by Cal OES and FEMA into Fourth Draft Plan</li> <li>Invite general public and external agencies to review, comment, and contribute to the Fourth Draft Plan</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate input into the City Council staff report.</li> <li>Post public notice of City Council meeting</li> <li>Fourth Draft Plan distributed to City Council in advance of meeting</li> <li>Present Fourth Draft Plan to the City Council</li> <li>City Council adopts Plan</li> <li>Incorporate input from City Council meeting into Final Draft Plan</li> </ul>	<ul style="list-style-type: none"> <li>Submit Final Draft Plan to FEMA with request for final approval</li> <li>Receive FEMA approval</li> <li>Incorporate FEMA approval into the Final Plan</li> </ul>	<ul style="list-style-type: none"> <li>Conduct quarterly Planning Team meetings</li> <li>Integrate mitigation action items into budget, CIP and other funding and strategic documents</li> </ul>





## Plan Methodology

The Planning Team discussed knowledge of natural hazards and past historical events, as well as planning and zoning codes, ordinances, and recent planning decisions.

The rest of this section describes the mitigation planning process including 1) Planning Team involvement, 2) extended Planning Team support (department heads), 3) public and external agency involvement; and 4) integration of existing data and plans.

### Q&A | ELEMENT A: PLANNING PROCESS | A1

**Q:** A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))

**A:** See **Table: Planning Team Involvement and Level of Participation** below.

## Planning Team Involvement

The Planning Team consisted of representatives from City of Signal Hill departments related to hazard mitigation processes. The Planning Team served as the primary stakeholders throughout the planning process. Citizens and businesses (general public) along with external agencies (special districts and adjoining jurisdictions) served as secondary stakeholders in the planning process. The Planning Team was responsible for the following tasks:

- ✓ Confirming planning goals
- ✓ Prepare timeline for plan update
- ✓ Ensure plan meets DMA 2000 requirements
- ✓ Organize and solicit involvement of public and external agencies
- ✓ Analyze existing data and reports
- ✓ Update hazard information
- ✓ Review HAZUS loss projection estimates
- ✓ Update status of Mitigation Action Items
- ✓ Develop new Mitigation Action Items
- ✓ Participate in Planning Team meetings and City Council public meeting

The Planning Team, with assistance from Emergency Planning Consultants, identified and profiled hazards; determined hazard rankings; estimated potential exposure or losses; evaluated development trends and specific risks; and developed mitigation goals and action items.



**Table: Planning Team Level of Participation**

Name	Research and Writing of Plan	Planning Team Meeting 8/10/16	Planning Team Meeting 8/31/2016	Planning Team Meeting 9/7/2016	Planning Team Review and Comment on First Draft Plan	Share Second Draft with General Public and External Agencies	Submit Third Draft Plan to Cal OES/FEMA for Conditional Approval	Post Fourth Draft Plan for Review by General Public and External Agencies	Present Fifth Draft Plan to City Council at Public Meeting	Submit Final Draft Plan to FEMA for Final Approval
<b>City of Signal Hill</b>										
Selena Alanis		X			X					
Travis Brooks	X				X					
Scott Charney	X	X			X					
Charlie Honeycutt	X	X			X					X
Richard Johnson, Chair	X	X			X	X	X	X	X	X
Michael Langston	X	X			X					
Aly Mancini	X	X			X					
Terri Marsh	X	X			X					
Steve Myrter		X			X					
<b>Emergency Planning Consultants</b>										
Carolyn J. Harshman	X	X								



**Table: Planning Team Timeline**

	April 2016	May	June	July	August	September	October	November	December	January 2017
Research and Writing of First Draft Plan	X	X	X	X	X					
Planning Team Meetings					X	X				
Planning Team Comment on First Draft Plan						X				
Share Second Draft Plan with General Public and External Agencies							X			
Submit Third Draft Plan to Cal OES/FEMA for Conditional Approval								X		
Incorporate mandated amendments into Fourth Draft Plan										
Post Fourth Draft Plan for Review by General Public and External Agencies along with posting of City Council meeting.										
Present Fourth Draft Plan to City Council										
Submit Final Draft Plan to FEMA for Final Approval										
Incorporate FEMA Approval into Final Plan										



## Q&A | ELEMENT A: PLANNING PROCESS | A2

**Q:** A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))

**A:** See **General Public and External Agency Involvement** below.

## Q&A | ELEMENT A: PLANNING PROCESS | A3

**Q:** A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))

**A:** See **General Public and External Agency Involvement** below.

## General Public and External Agency Involvement

The Planning Team provided data and expertise during plan writing phase. This effort was supplemented through the assistance of the general public and external agencies (special districts and adjoining jurisdictions). The City posted public notices announcing the availability of the Second Draft Plan on its website and other customary posting locations. Copies of the postings are located in the **Appendix**. The postings directed the general public to the City's website where the Second Draft Plan was available for download along with a request to submit input directly to the Chair of the Planning Team.

External agencies listed below were invited via email and provided with an electronic link to the City's website. Following is the email distributed along with the invitation to comments:

**Figure: External Agencies Email Invite**

INSERT EMAIL



Feedback received from the general public and external agencies included [REDACTED] which was incorporated into the Third Draft Plan prior to submission to Cal OES and FEMA.

In advance of the City Council public meeting, the general public (via public noticing) and external agencies (via email invitation) were informed of the Fourth Draft Plan and encouraged to provide input and attend the public meeting. Gathered comments from the public and external agencies were noted in the City Council Staff Report and added to the Final Draft Plan.

## Table: External Agencies

**Q&A | ELEMENT C. MITIGATION STRATEGY | C1**

**Q:** C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))

**A: See Capability Assessment – Existing Processes and Programs below.**

## Capability Assessment – Existing Processes and Programs

The City will incorporate mitigation planning as an integral component of daily operations. This will be accomplished by the Planning Team working with their respective departments to integrate mitigation strategies into the planning documents and operational guidelines within the City. In addition to the Capability Assessment below, the Planning Team will strive to identify additional policies, programs, practices, and procedures that could be created or modified to address mitigation activities.



**Table: Capability Assessment - Existing Processes and Programs**

Process	Action	Implementation of Plan
Administrative	Departmental or organizational work plans, policies, and procedural changes	<ul style="list-style-type: none"> <li>✓ City Administration</li> <li>✓ Community Development Department</li> <li>✓ Public Works Department</li> <li>✓ Other departments as appropriate</li> </ul>
Administrative	Other plans	<ul style="list-style-type: none"> <li>✓ Reference plan in Emergency Operations Plan</li> <li>✓ Address plan findings and incorporate mitigation activities in General Plan</li> </ul>
Budgetary	Capital and operational budgets	<ul style="list-style-type: none"> <li>✓ Include line item mitigation measures in budget as appropriate</li> </ul>
Regulatory	Executive orders, ordinances, and other directives	<ul style="list-style-type: none"> <li>✓ Building Code</li> <li>✓ Capital Improvement Plan (Require hazard mitigation in design of new construction)</li> <li>✓ General Plan (Institutionalize hazard mitigation in land use, new construction and major renovations)</li> <li>✓ National Flood Insurance Program</li> <li>✓ Storm Water Management Plan</li> <li>✓ Zoning Ordinance</li> <li>✓ Strategic Plan 2015-2019</li> </ul>
Funding	Traditional and nontraditional sources	<ul style="list-style-type: none"> <li>✓ Once plan is approved, seek authority to use bonds, fees, loans, and taxes to finance projects</li> <li>✓ Seek assistance from federal and state government, foundation, nonprofit, and private sources, such as Hazard Mitigation Grant Program</li> <li>✓ Research and grant opportunities through U.S. Department of Housing and Urban Development, Community Development Block Grant</li> </ul>
Partnerships	Creative funding and initiatives	<ul style="list-style-type: none"> <li>✓ Community volunteers</li> <li>✓ In-kind resources</li> <li>✓ Public-private partnerships</li> <li>✓ State support</li> </ul>
Partnerships	Advisory bodies and committees	<ul style="list-style-type: none"> <li>✓ Disaster Council</li> <li>✓ Disaster Management Area Coordinator</li> <li>✓ Safety Committee</li> </ul>



## Q&A | ELEMENT A: PLANNING PROCESS | A4

**Q:** A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))

**A:** See **Use of Existing Data** below.

### Use of Existing Data

The Planning Team gathered and reviewed existing data and plans during plan writing and specifically noted as “sources”. Numerous electronic and hard copy documents were used to support the planning process:

- ✓ City of Signal Hill General Plan and Elements
- ✓ City of Long Beach Hazard Mitigation Plan (Draft 2016)
- ✓ County of Los Angeles All-Hazards Mitigation Plan (2014)
- ✓ California State Hazard Mitigation Plan (2013)
- ✓ HAZUS maps and reports
- ✓ Census data
- ✓ FEMA “How To” Mitigation Series (386-1 to 386-9)
- ✓ National Oceanic and Atmospheric Administration statistics
- ✓ Historic GIS maps and local inventory data
- ✓ Local Flood Insurance Rate Maps

## Q&A | ELEMENT E: PLAN ADOPTION | E1

**Q:** E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))

**A:** See **Plan Adoption Process** below.

### Plan Adoption Process

Adoption of the plan by the local governing body demonstrates the City’s commitment to meeting mitigation goals and objectives. Governing body approval legitimizes the plan and authorizes responsible agencies to execute their responsibilities.

The City Council must adopt the Mitigation Plan before the Plan can be approved by FEMA.

In preparation for the public meeting with the City Council, the Planning Team prepared a Staff Report including an overview of the Planning Process, Risk Assessment, Mitigation Goals, and Mitigation Actions. The staff presentation concluded with a summary of the input received during the public review of the document. The meeting participants were encouraged to present their views and make suggestions on possible mitigation actions.



The City Council heard the item on [REDACTED]. The City Council voted [REDACTED] to adopt the updated Mitigation Plan. The Resolution of adoption by the City Council is in the **Appendix**.

## Plan Approval

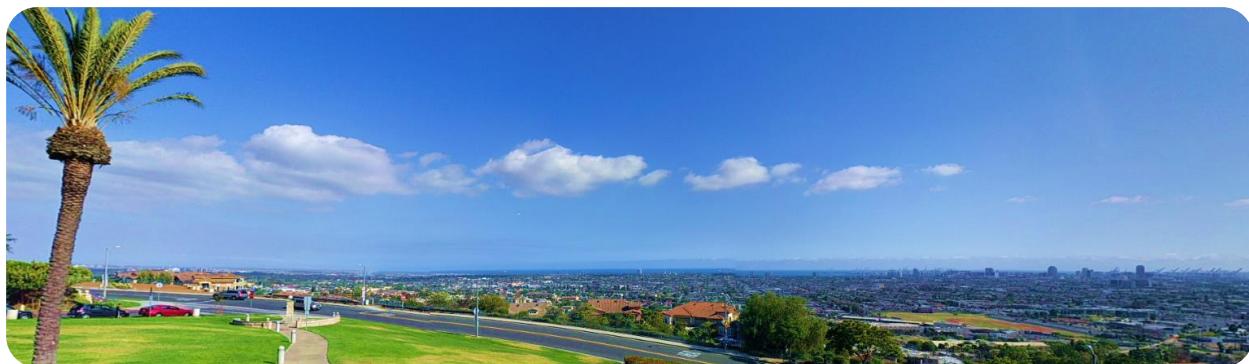
FEMA approved the Plan on [REDACTED]. A copy of the FEMA Letter of Approval is in the **Appendix**.

## Part II: RISK ASSESSMENT

### Community Profile

#### Geography and the Environment

The City of Signal Hill is located approximately two miles north of the Pacific Ocean in southern Los Angeles County. Signal Hill consists of 2.2 square miles completely surrounded by the City of Long Beach. Regional access to the City is provided by freeways, especially Interstate 405 (I-405); arterial roadways; bus routes; a light rail line; two major seaports; and Long Beach Airport, which is located immediately northeast of Signal Hill.



According to the City's General Plan, the panoramic view from the crest of Signal Hill is truly one of the most beautiful in all of Southern California. Most spectacular is the view of the Pacific Ocean framed by the Palos Verdes Peninsula and the Sheep Hills at Newport Beach. This ocean view features rolling breakers at Huntington Beach, the Queen Mary and the Long Beach skyline arguably equally spectacular at night. To the northwest, Signal Hill vistas include the skyscrapers in downtown Los Angeles, the Hollywood sign and the Getty Museum of Art perched upon the Santa Monica Mountains. To the east the view is remarkably grand including the Long Beach Airport and the Pyramid at the California State University at Long Beach.

Most famous for the discovery of oil in 1921, and commonly known as an "oil town," the City is now a diverse community with an "oil history" and a bright future. By the turn of the 20th Century, stately mansions dotted the hilltop, as the value of the panoramic view became evident. However, by 1917 the prospect of striking oil on the hilltop surpassed the value of the view and the Union Oil Company drilled the first oil well in the area. The well failed to produce any oil and it was abandoned. Further exploration was suspended until the Royal Dutch Shell Oil Company resumed exploration and hit pay dirt on June 23, 1921. That first "gusher," at Alamitos Well #1, marked a turning point in Signal Hill's history and put the city on the map.





Ultimately one of the richest oil fields in the world, it produced over 1 billion barrels of oil by 1984. The field is still active and produced over 1.6 million barrels of oil in 1994 alone. Oil production continued to be Signal Hill's mainstay until declining oil prices reduced production in the 1970's. Today, Signal Hill is a well-balanced, financially sound and economically diverse community of over 11,673 people.

## Climate

According to the City of Signal Hill's General Plan – Environmental Resources Element (1989), is located within a moderate climate of the South Coast Air Basin. The annual average temperature in the City ranges from the mid 50°F in winter to the mid 70°F in the summer. Freezing conditions and temperatures over 100°F occur infrequently.

The prevailing wind pattern is a daytime sea breeze, flowing toward the east and northeast with little seasonal variability. Nighttime winds are light, and although variable, often have an offshore character that flows toward the south/southwest. During the fall and early winter, Santa Ana wind conditions sometimes occur. These relatively strong winds flow from the mountains in the east toward the southwest in the vicinity of Signal Hill and generally increase local temperatures.

Annual precipitation varies, with long-term average of about 15.4 inches per year. Annual average relative humidity in January ranges from 50 to 75 percent daily, whereas in July it varies from 60 to 85 percent. As the State of California and the Los Angeles region has undergone a several-year drought, rainfall has been much lower in the City.

Furthermore, actual rainfall in the Southern California region tends to fall in large amounts during sporadic and often heavy storms rather than consistently over storms at somewhat regular intervals. In short rainfall in Southern California might be characterized as feast or famine within a single year.

## Population and Demographics

According to the City's General Plan, in 1980, the City's population was approximately 5,734 residents. According to the California Department of Finance (2016), the population has grown to 11,673 as of 2016. From 2000 to 2016, the City has experienced an average growth rate of 1.4 percent annually. Similarly, the population of Los Angeles County experienced a growth rate of 0.4 percent per year.

According to the California Department of Finance (2014), the demographic makeup of the City is as follows:



**Table: City of Signal Hill Demographics**  
**(Source: California Department of Finance, E-5, 2014)**

Racial/Ethnic Group	2000	2014	Change	Change %
White	2,828	3,184	356	13%
Black	1,213	1,483	270	22%
American Indian Eskimo	19	23	4	21%
Asian or Pacific Islander	1,876	2,510	634	34%
Other	457	468	11	2%
<b>Total</b>	<b>9,333</b>	<b>11,411</b>	<b>2,078</b>	<b>22%</b>
Hispanic	2,940	3,743	803	27%

## Housing and Community Development

**Table: City of Signal Hill Housing**  
**(Source: California Department of Finance, E-5, 2016)**

2014	Number	Percent %
<b>Housing Type:</b>		
1-unit, detached	1,423	31.7%
1-unit, attached	618	13.8%
2-4 Units	638	14%
5+ Units	1,852	40.5%
Mobile homes/Other	0	0 %
<b>Housing Statistics:</b>		
Total Available Housing Units	4,531	100 %
Owner-Occupied Housing	2,340	51.6 %
Renter-Occupied	2,191	48.4 %
<b>Average Household Size:</b>	2.7 persons	
<b>Median Home Price:</b>	\$440,000	



## Employment and Industry

According to the City's General Plan, Signal Hill has a large and growing retail and commercial services employment base. The major employers within the City include Office Depot, Costco, and the Oil Well Service Company.

**Table: City of Signal Hill Industry**  
**(Source: American Community Survey - 2014)**

Industry	2014	
	Number	Percent %
Agriculture, forestry, fishing and hunting, and mining	33	0.6%
Construction	445	8.0%
Manufacturing	506	9.1%
Wholesale Trade	154	2.8%
Retail Trade	478	8.6%
Transportation and Warehousing, and Utilities	386	6.9%
Information	154	2.8%
Finance and insurance, and real estate and rental and leasing	339	6.1%
Professional, scientific, and management, and administrative and waste management services	908	16.2%
Educational services, and health care and social assistance	1,145	20.5%
Arts, entertainment, and recreation, and accommodation and food services	559	10.0%
Other services, except public administration	275	4.9%
Public administration	206	3.7%



**Table: City of Signal Hill Occupation**  
**(Source: American Community Survey - 2014)**

Occupation	2014	
	Number	Percent
Civilian employed population (16 years and over)	5,588	38.5%
Management, business, science, and arts occupations	2,152	19.2%
Service occupations	1,074	26.9%
Sales and office occupations	1,503	6.4%
Natural resources, construction, and maintenance occupations	359	8.9%
Production, transportation, and material moving	500	38.5%

## Transportation and Commuting Patterns

According to the City of Signal Hill's General Plan – Circulation Element (2009), Signal Hill is completely surrounded by the city of Long Beach, and its transportation network is intertwined with that of its neighbor. Regional access to the City as shown on **Map: Regional Access**, is provided by freeways, especially Interstate 405 (I-405); arterial roadways; bus routes; a light rail line; two major seaports; and Long Beach Airport, which is located immediately northeast of Signal Hill.

The existing Signal Hill transportation system consists of roads of varying sizes and capacities; public transportation systems, including bus, light rail, and paratransit service; airports, and seaports as shown on **Map: Roadway Classifications**. The network created by these systems serves two distinct and equally important functions: 1) to provide access to adjacent land uses, and 2) to facilitate the movement of persons and goods to, from, within, and through the City.

### *Interstate*

The San Diego Freeway (Interstate 405 or I-405) crosses the northern portion of Signal Hill. The highway is owned and maintained by Caltrans. In the Signal Hill area, the I-405 currently consists of ten travel lanes, including eight mixed-flow and two carpool lanes.

Interstate 405 is one of the major access routes to Signal Hill but is also a major traffic generator that affects traffic flow within the City. The freeway interchanges with the Long Beach Freeway (I-710) approximately three miles northwest of Cherry Avenue, with the San Gabriel Freeway (I-605) approximately five miles southeast of Cherry Avenue, and with the Garden Grove Freeway (State Route 22 or SR-22) approximately 7.5 miles southeast of Cherry Avenue. Full freeway access is provided at Atlantic, Cherry, and Orange Avenues. Northbound I-405 access to the City for traffic oriented south on Cherry Avenue is provided at Temple Avenue. This circuitous access to Cherry Avenue increases traffic levels on Temple Avenue and Spring Street and is confusing to motorists.



The 2003 Short-Range Transportation Plan (SRTP), prepared by the Metropolitan Transportation Authority (Metro), recognizes the I-405 as a “congested corridor” in the Signal Hill area, and identifies the Cherry and Atlantic Avenue ramps as “hot spots” with recurring heavy traffic congestion. These designations make this freeway corridor a higher priority for future improvements; however, no major improvements are currently funded.

### *Bus Service*

Signal Hill is well-served by bus systems. Services provided by Long Beach Transit and Metro operate within or in the vicinity of the City; additional bus lines are accessible through the nearby Long Beach Transit Mall.

Long Beach Transit is the primary public transportation provider to Signal Hill. It is a municipal transit agency operated on behalf of the City of Long Beach by a nonprofit corporation, the Long Beach Public Transportation Company. In 2007, Long Beach Transit operated a total of 249 buses on 38 bus routes, providing over 26.6 million passenger trips. Service is provided from approximately 4:30 am to 1:30 am, seven days per week.

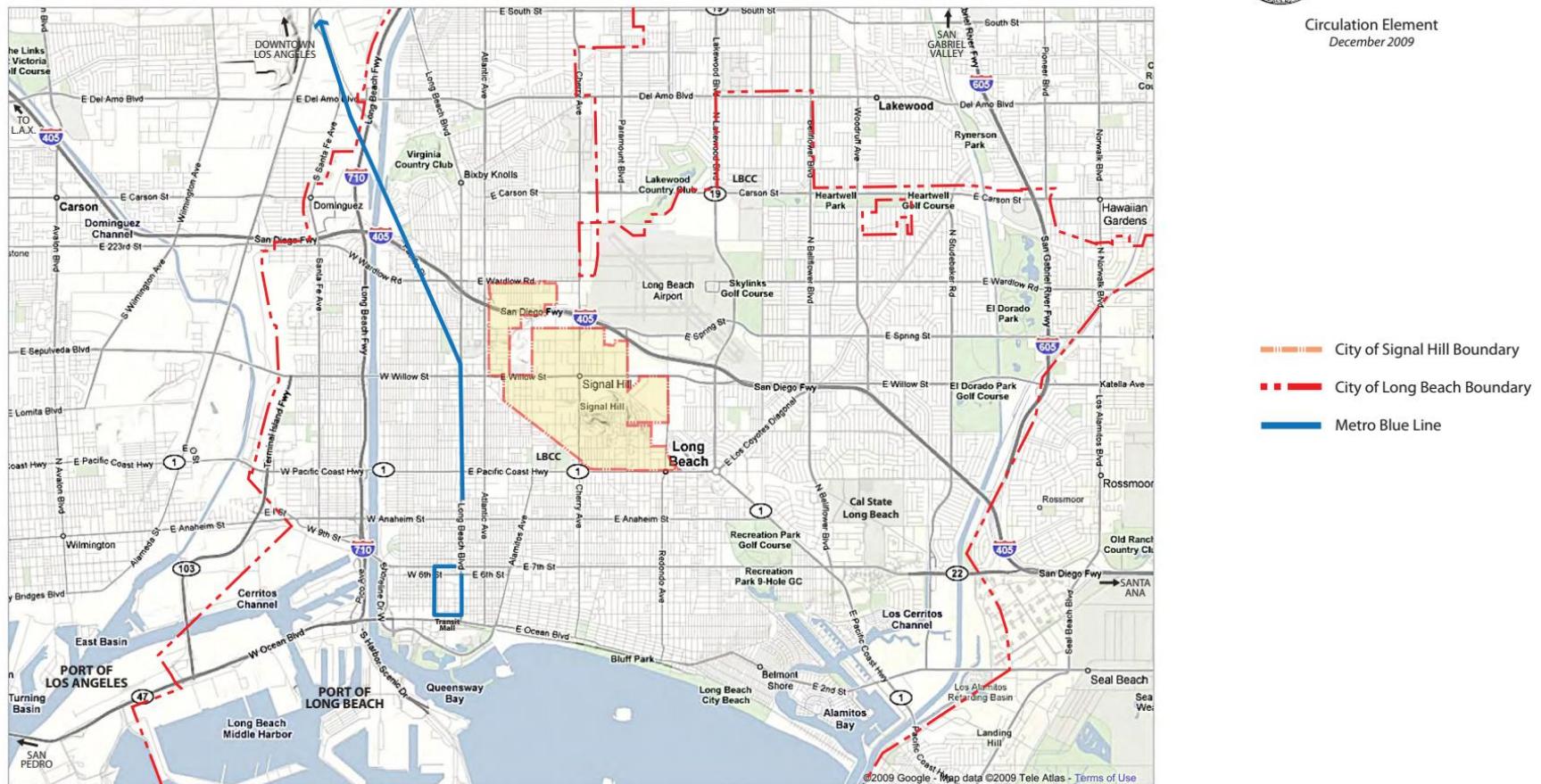
## Map: Regional Access

(Source: City of Signal Hill General Plan – Circulation Element 2009)



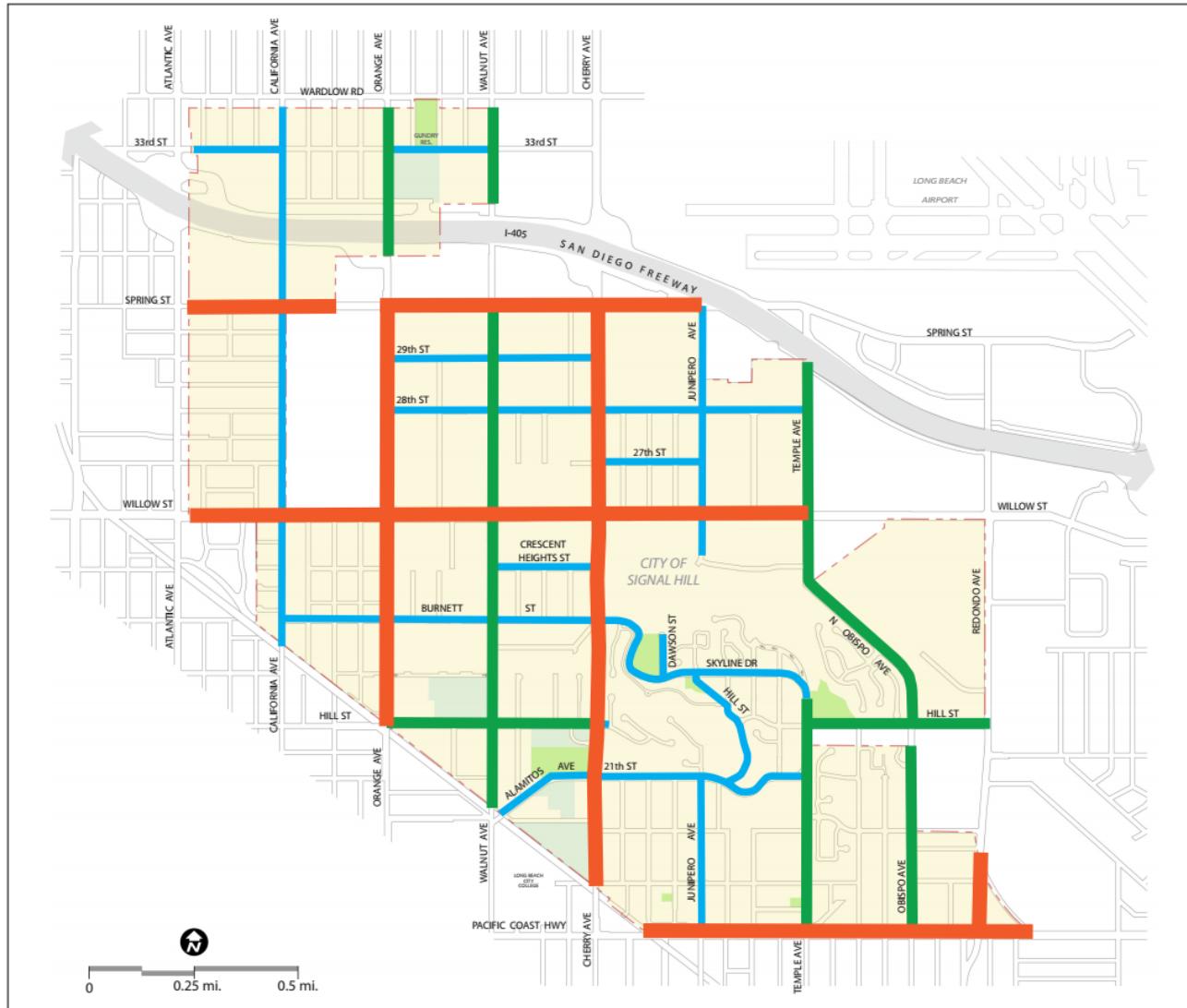
City of Signal Hill  
**GENERAL PLAN**

Circulation Element  
December 2009





**Map: Roadway Classifications**  
(Source: City of Signal Hill General Plan – Circulation Element 2009)



Circulation Element  
December 2009

- ↔ Freeway
- Principal Arterial
- Minor Arterial
- Collector
- City of Signal Hill Boundary

# Risk Assessment

## What is a Risk Assessment?

Conducting a risk assessment can provide information regarding: the location of hazards; the value of existing land and property in hazard locations; and an analysis of risk to life, property, and the environment that may result from natural hazard events. Specifically, the five levels of a risk assessment are as follows:

1. *Hazard Identification*
2. *Profiling Hazard Events*
3. *Vulnerability Assessment/Inventory of Existing Assets*
4. *Risk Analysis*
5. *Assessing Vulnerability/Analyzing Development Trends*

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1

**Q:** B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))

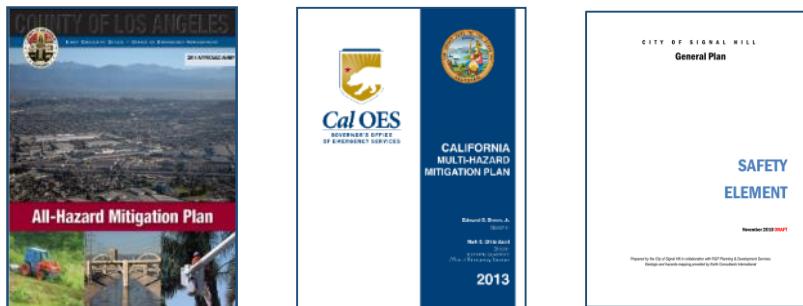
**A:** See **Hazard Identification** below.

#### 1) Hazard Identification

This section is the description of the geographic extent, potential intensity, and the probability of occurrence of a given hazard. Maps are used in this plan to display hazard identification data.

**The City of Signal Hill utilized the categorization of hazards as identified in California's State Hazard Mitigation Plan, including: Earthquakes, Floods, Levee failures, Wildfires, Landslides and earth movements, Tsunami, Climate-related hazards, Volcanoes, and Other hazards.**

Next, the Planning Team reviewed existing documents to determine which of these hazards posed the most significant threat to the City. In other words, which hazard would likely result in a local declaration of emergency.



The geographic extent of each of the identified hazards was identified by the Planning Team utilizing maps and data contained in the City's General Plan and City's Emergency Operations Plan. In addition, numerous internet resources and the County of Los Angeles All-Hazards Mitigation Plan served as valuable resources. Utilizing the Calculated Priority Risk Index (CPRI)



ranking technique, the Planning Team concluded the following hazards posed a significant threat against the City:

**Earthquake | Landslide | Windstorm | Drought**

The hazard ranking system is described in **Table: Calculated Priority Risk Index**, while the actual ranking is shown in **Table: Calculated Priority Risk Index Ranking for City of Signal Hill**.



**Table: Calculated Priority Risk Index**  
 (Source: Federal Emergency Management Agency)

CPRI Category	Degree of Risk			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 1 in 1,000 years.	1	45%
	Possibly	Rare occurrences. Annual probability of between 1 in 100 years and 1 in 1,000 years.	2	
	Likely	Occasional occurrences with at least 2 or more documented historic events. Annual probability of between 1 in 10 years and 1 in 100 years.	3	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 1 every year.	4	
Magnitude/Severity	Negligible	Negligible property damages (less than 5% of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible loss of quality of life. Shut down of critical public facilities for less than 24 hours.	1	30%
	Limited	Slight property damage (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability, and there are no deaths. Moderate loss of quality of life. Shut down of critical public facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damage (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least 1 death. Shut down of critical public facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damage (greater than 50% of critical and non-critical facilities and infrastructure). Injuries and illnesses result in permanent disability and multiple deaths. Shut down of critical public facilities for more than 1 month.	4	
Warning Time	> 24 hours	Population will receive greater than 24 hours of warning.	1	15%
	12-24 hours	Population will receive between 12-24 hours of warning.	2	
	6-12 hours	Population will receive between 6-12 hours of warning.	3	
	< 6 hours	Population will receive less than 6 hours of warning.	4	
Duration	< 6 hours	Disaster event will last less than 6 hours	1	10%
	< 24 hours	Disaster event will last less than 6-24 hours	2	
	< 1 week	Disaster event will last between 24 hours and 1 week.	3	
	> 1 week	Disaster event will last more than 1 week	4	



**Table: Calculated Priority Risk Index Ranking for City of Signal Hill**

Hazard	Probability	Weighted 45% (x.45)	Magnitude Severity	Weighted 30% (x.3)	Warning Time	Weighted 15% (x.15)	Duration	Weighted 10% (x.1)	CPRI Ranking
Earthquake – San Andreas M7.8	3	1.35	3	0.9	4	0.6	1	0.1	<b>2.95</b>
Earthquake – Newport-Inglewood M6.9	3	1.35	3	0.9	4	0.6	1	0.1	<b>2.95</b>
Earthquake – Puente Hills M7.1	3	1.35	3	0.9	4	0.6	1	0.1	<b>2.95</b>
Landslide	2	.90	2	0.6	4	0.6	1	0.1	<b>2.20</b>
Windstorm	4	1.80	2	0.6	1	0.15	2	0.2	<b>2.75</b>
Drought	4	1.80	1	0.3	1	0.15	4	0.4	<b>2.65</b>

## 2) Profiling Hazard Events

This process describes the causes and characteristics of each hazard and what part of the City's facilities, infrastructure, and environment may be vulnerable to each specific hazard. A profile of each hazard discussed in this plan is provided in the City-Specific Hazard Analysis. **Table: Vulnerability: Location, Extent, and Probability for City of Signal Hill** indicates a generalized perspective of the community's vulnerability of the various hazards according to extent (or degree), location, and probability.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1

**Q:** B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))

**A:** See **Table: Vulnerability: Location, Extent, and Probability for City of Signal Hill** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2

**Q:** B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Table: Vulnerability: Location, Extent, and Probability for City of Signal Hill** below.



**Table: Vulnerability: Location, Extent, and Probability for City of Signal Hill**

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Previous Occurrences
Earthquake	Entire Project Area	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7 % probability that an earthquake of M6.7 or greater will hit California within 30 years. <sup>1</sup>	Moderate	1994 – Northridge Earthquake
Landslide	Hillside areas surrounding Hilltop Park Undeveloped land areas on West side of City	Earthquake-induced and rain-induced landslide events possibly impacting dozens of structures.	Moderate	1995
Windstorm	Entire Project Area	30 miles per hour or greater.	High	Annual
Drought	Entire Project Area	Droughts in urban areas vary considerably in scope and intensity. Likely emergency water shortage regulations would restrict such activities as watering of landscape, washing of cars, and other non-safety related activities.	Moderate	Mild Drought Now

\* Probability is defined as: Low = 1:1,000 years, Moderate = 1:100 years, High = 1:10 years

<sup>1</sup> Uniform California Earthquake Rupture Forecast

### 3) Vulnerability Assessment/Inventory of Existing Assets

A Vulnerability Assessment in its simplest form is a simultaneous look at the geographical location of hazards and an inventory of the underlying land uses (populations, structures, etc.). Facilities that provide critical and essential services following a major emergency are of particular concern because these locations house staff and equipment necessary to provide important public safety, emergency response, and/or disaster recovery functions.

### Critical and Essential Facilities

Facilities critical to government response activities (i.e., life safety and property and environmental protection) include: local government 9-1-1 dispatch centers, local government emergency operations centers, local police and fire stations, local public works facilities, local communications centers, schools (shelters), and hospitals. Also, facilities that, if damaged, could cause serious secondary impacts are also considered "critical". A hazardous materials facility is one example of this type of critical facility.



Essential facilities are those facilities that are vital to the continued delivery of key City services or that may significantly impact the City's ability to recover from the disaster. These facilities include but are not limited to: schools (hosting shelters); buildings such as the jail, law enforcement center, public services building, community corrections center, the courthouse, and juvenile services building and other public facilities.

**Table: Critical and Essential Facilities Vulnerable to Hazards** illustrates the critical and essential facilities within City of Signal Hill and the vulnerability of those facilities to the identified hazards.

**Table: Critical and Essential Facilities Vulnerable to Hazards**

Name of Facility	Earthquake	Landslide	Windstorm	Drought
<b>City Hall</b> 2175 Cherry Avenue	X		X	X
<b>Los Angeles County Fire - Signal Hill Station</b> 2300 E. 27 <sup>th</sup> Street	X		X	X
<b>Police Department / Emergency Operations Center</b> 2745 Walnut Avenue	X		X	X
<b>City Corporate Yard (Public Works)</b> 2175 E. 28 <sup>th</sup> Street	X		X	X
<b>Community Center</b> 1780 E. Hill Street	X		X	X
<b>Hilltop Park</b> 2351 Dawson Ave	X	X	X	X
<b>Discovery Well Park</b> 2200 Temple Ave	X	X	X	X
<b>Signal Hill Elementary</b> 2285 Walnut Avenue	X		X	X
<b>Alvarado Elementary School</b> 990 East 21 <sup>st</sup> Street	X		X	X
<b>Jessie E. Nelson Academy</b> 1260 E. 33 <sup>rd</sup> Street	X		X	X
<b>Library</b> 1770 East Hill Street (under construction in 2016/2017)	X		X	X



## 4) Risk Analysis

Estimating potential losses involves assessing the damage, injuries, and financial costs likely to be sustained in a geographic area over a given period of time. This level of analysis involves using mathematical models. The two measurable components of risk analysis are magnitude of the harm that may result and the likelihood of the harm occurring. Describing vulnerability in terms of dollar losses provides the community and the state with a common framework in which to measure the effects of hazards on assets. For each hazard where data was available, quantitative estimates for potential losses have been included in the hazard assessment. Data was not available to make vulnerability determinations in terms of dollar losses for all of the identified hazards. The **Mitigation Actions Matrix** includes an action item to conduct such an assessment in the future.

## 5) Assessing Vulnerability/ Analyzing Development Trends

This step provides a general description of City facilities and contents in relation to the identified hazards so that mitigation options can be considered in land use planning and future land use decisions. This Mitigation Plan provides comprehensive description of the character of the City of Signal Hill in the **Community Profile Section**. This description includes the geography and environment, population and demographics, land use and development, housing and community development, employment and industry, and transportation and commuting patterns. Analyzing these components of the City of Signal Hill can help in identifying potential problem areas and can serve as a guide for incorporating the goals and ideas contained in this mitigation plan into other community development plans.

Hazard assessments are subject to the availability of hazard-specific data. Gathering data for a hazard assessment requires a commitment of resources on the part of participating organizations and agencies. Each hazard-specific section of the plan includes a section on hazard identification using data and information from City, County, state, or federal sources.

Regardless of the data available for hazard assessments, there are numerous strategies the City can take to reduce risk. These strategies are described in the action items detailed in the Mitigation Actions Matrix in the **Mitigation Strategies Section**. Mitigation strategies can further reduce disruption to critical services, reduce the risk to human life, and alleviate damage to personal and public property and infrastructure.

## Land and Development

The City of Signal Hill General Plan provides the framework for the growth and development of the City. This Plan is one of the City's most important tools in addressing environmental challenges including transportation and air quality; growth management; conservation of natural resources; clean water and open spaces.

According to the City's General Plan - Land Use Element (2001), Signal Hill's land use pattern is well established and it is not anticipated to change materially over time. New development will occur within the vacant oil field areas and to a lesser extent in-fill development is anticipated in established neighborhoods. Significant constraints to development of the "oil patch" will continue to limit the availability of development sites and the rate of development. These constraints include: ongoing oil field operations, steep slopes, unsuitable soils, environmental contamination, lack of existing utility systems or the need to upgrade existing systems, small lot sizes, complex



property ownership patterns, and a reluctance by traditional lending institutions to finance development of environmentally impacted properties.

## Impacts to Types of Land Uses

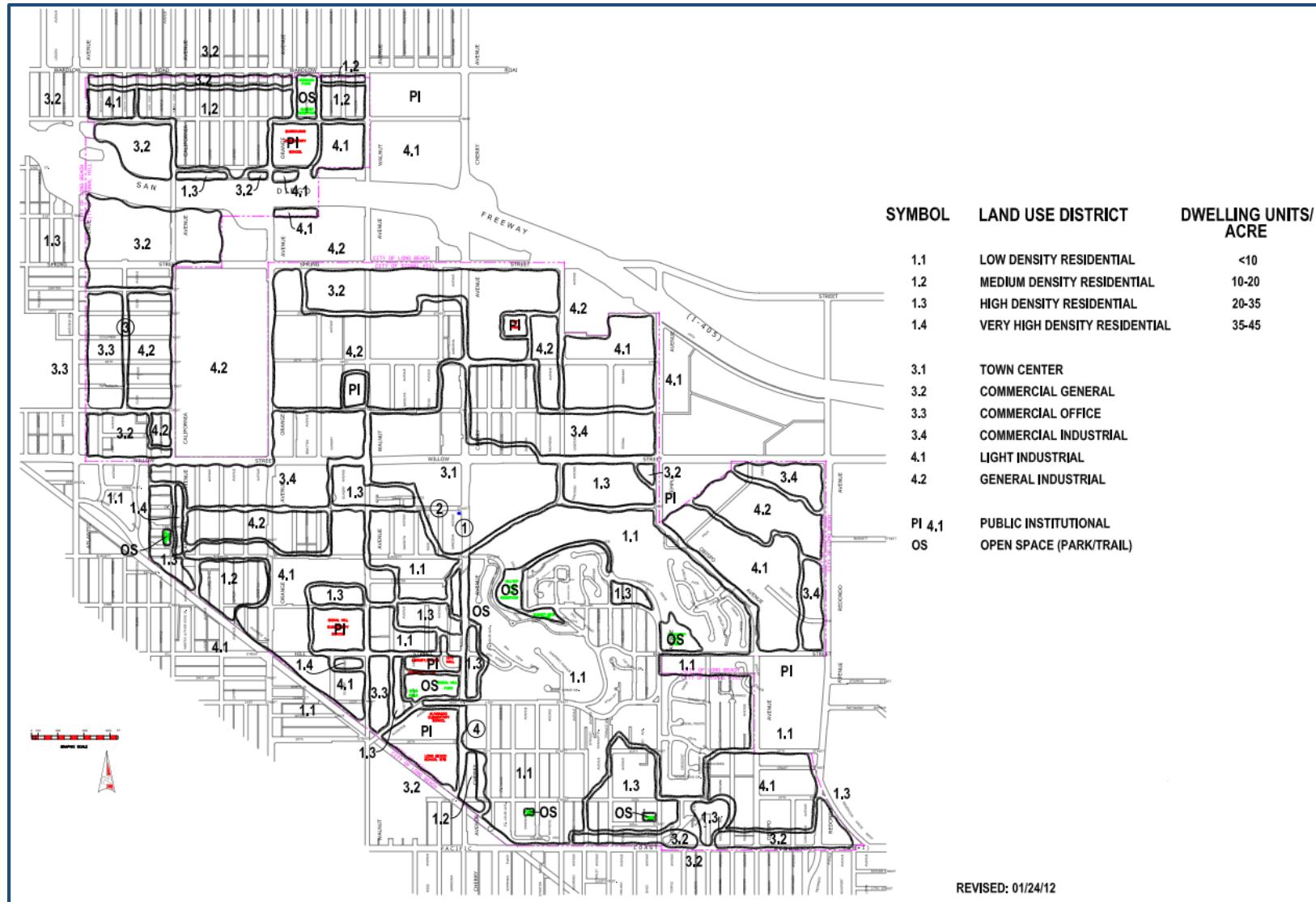
City of Signal Hill's General Plan identifies primarily residential land uses with other land uses consisting of commercial, industrial, public institutional, and open space.

**Table: Impacts to Existing and Future Land Uses in the City of Signal Hill**  
**(Source: EPC analysis based on City of Signal Hill General Plan – Land Use Element 2001)**

Category of Land Use Designation	Acre(s) (%)	Earthquake	Landslide	Windstorm	Drought
Low Density Residential	350 (24%)	X	X	X	X
Medium Density Residential	68 (5%)	X		X	X
High Density Residential	84 (6%)	X	X	X	X
Town Center	87 (6%)	X		X	X
Commercial General	179 (13%)	X		X	X
Commercial Office	25 (2%)	X	X	X	X
Commercial Industrial	151 (11%)	X		X	X
Light Industrial	195 (14%)	X	X	X	X
General Industrial	192 (14%)	X	X	X	X
Public Institutional	35 (3%)	X	X	X	X
Open Space	24 (2%)	X	X	X	X

## Map: Land Use Map

(Source: City of Signal Hill General Plan – Land Use Element, 2001)



# Earthquake Hazards

## Previous Occurrences of Earthquakes in the City of Signal Hill

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2

**Q:** B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See [Previous Occurrences of Earthquakes in the City of Signal Hill](#) below.

The following earthquake events significantly impacted the region surrounding the City of Signal Hill.

In January 1994, the magnitude 6.7 Northridge Earthquake (thrust fault) which produced severe ground motion, caused 57 deaths, 9,253 injuries and left over 20,000 displaced. Scientists have stated that such devastating shaking should be considered the norm near any large thrust earthquake. Recent reports from scientists of the U.S. Geological Survey and the Southern California Earthquake Center say that the Los Angeles Area could expect one earthquake every year of magnitude 5.0 or more for the foreseeable future.



Since the writing of the 2012 Mitigation Plan, there have been no significant earthquake events in the City of Signal Hill.

## Previous Occurrences of Earthquakes in Los Angeles County

Southern California has a history of powerful and relatively frequent earthquakes, dating back to the powerful magnitude 8.0+ 1857 San Andreas Earthquake which did substantial damage to the relatively few buildings that existed at the time.

Paleoseismological research indicates that large magnitude (8.0+) earthquakes occur on the San Andreas Fault at intervals between 45 and 332 years with an average interval of 140 years. Other lesser faults have also caused very damaging earthquakes since 1857. Notable earthquakes include the 1933 Long Beach Earthquake, the 1971 San Fernando Earthquake, the 1987 Whittier Earthquake and the 1994 Northridge Earthquake.

## Local Conditions

According to the City of Signal Hill General Plan - Safety Element (2016), Signal Hill is located in a seismically active region, and major regional faults create the risk of substantial earth shaking and potential ground rupture in the area. Within Los Angeles County, there are over 50 active and potentially active fault segments, an undetermined number of buried faults, and at least 4 blind-thrust faults capable of producing damaging earthquakes.

Several active faults have been identified within close proximity or within the City boundaries which, most importantly, indicates that the community falls under the State Earthquake Fault



Zoning Act and the State Hazards Mapping Act. These Acts require that local governments, in the general plan update process, adopt policies and criteria to ensure the structural adequacy of buildings erected across active faults for human occupancy. In some cases, the development of structures must be prohibited.

Earthquakes that could affect the City would most likely originate from the San Andreas, Newport-Inglewood, or Puente Hills Faults. These faults are close enough in proximity or expected to generate strong enough shaking that could affect the City.

### *San Andreas Fault Zone*

The San Andreas Fault Zone is located approximately 40 miles northeast of the City of Signal Hill. This fault zone extends from the Gulf of California northward to the Cape Mendocino area where it continues northward along the ocean floor. The total length of the San Andreas Fault Zone is approximately 750 miles. The activity of the fault has been recorded during historic events, including the 1906 (M8.0) event in San Francisco and the 1857 (M7.9) event between Cholame and San Bernardino, where at least 250 miles of surface rupture occurred. These seismic events are among the most significant earthquakes in California history. Geologic evidence suggests that the San Andreas Fault has a 50 percent chance of producing a magnitude 7.5 to 8.5 quake (comparable to the great San Francisco earthquake of 1906) within the next 30 years.

### *Newport-Inglewood Fault Zone*

Locally, the Newport-Inglewood Fault System cuts diagonally across Signal Hill as shown on **Map: Regional Faults**. This is the most significant seismic feature in the area and is considered seismically active. The 1933 Long Beach earthquake resulted from activity on this fault. Within the Newport-Inglewood Fault System, five faults have been identified in and in the immediate vicinity of Signal Hill: the Cherry Hill Fault, Pickler Fault, Northeast Flank Fault, Reservoir Hill Fault, and Wardlow Fault. These faults are generally in a northwest-to-southeast alignment. The Wardlow Fault is a pre-quaternary fault that has not ruptured in at least 2 million years, and is therefore considered inactive. All other faults are considered active.

The Newport-Inglewood Fault System is a nearly linear alignment of faults extending 45 miles along the southwestern side of the Los Angeles basin. It can be traced as a series of topographic hills, ridges, and mesas from the Santa Monica Mountains to Newport Beach, where it trends offshore. Structures along the zone of deformation act as groundwater barriers and, at greater depths, as petroleum traps. Continuing seismic activity has been evidenced most prominently in recent times by the 1920 Inglewood and 1933 Long Beach earthquakes.

### *Puente Hills Fault*

The Puente Hills fault is located approximately 15 miles northeast of the City. According to USGS, the Puente Hills Fault was most recently responsible for the M5.1 La Habra earthquake on March 28, 2014 which caused an estimated \$2.6 million in damage. The USGS estimates that a future, larger M7.5 earthquake along the Puente Hills fault could kill 3,000 to 18,000 people and cause up to \$250 billion in damage. In contrast, a larger M8.0 quake along the San Andreas would cause an estimated 1,800 deaths.

### *Whittier Fault*



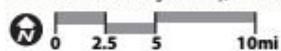
The Whittier Fault is a 25 mile right-lateral strike-slip fault that runs along the Chino Hills range between the cities of Chino Hills and Whittier. It is estimated that this fault could generate up to a magnitude 7.2 earthquake.

## Map: Regional Faults

(Source: City of Signal Hill General Plan – Safety Element 2016)

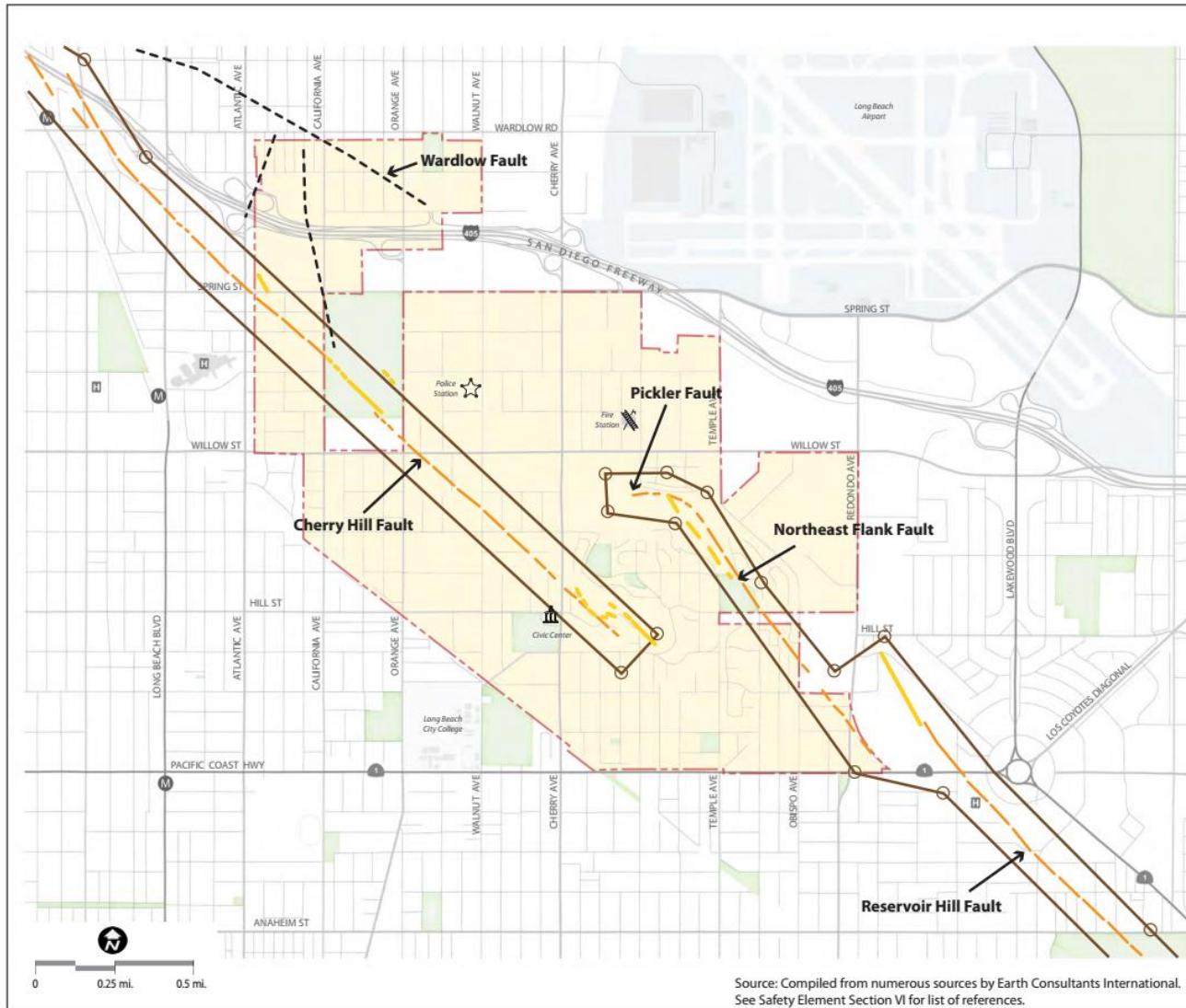


Sources: California Geological Survey, Southern California Earthquake Center



## Map: Local Faults

(Source: City of Signal Hill General Plan – Safety Element 2016)



**City of Signal Hill  
GENERAL PLAN**

Safety Element  
October 2010

- City of Signal Hill Boundary
- Active Faults
- Active and Potentially Active Fault Trace:
- - - Pre-Quaternary Faults
- Alquist-Priolo Earthquake Fault Zones

Note:

All faults shown are part of the Newport-Inglewood Fault Zone.

This map is intended for general land use planning only. Information on this map is not sufficient to serve as a substitute for detailed geologic investigations of individual sites, nor does it satisfy the evaluation requirements set forth in geologic hazard regulations.

Fault lines on the map are used solely to approximate the fault location. The width and location of the faults should not be used in lieu of site-specific investigations, evaluation, and design. Detailed geologic investigations, including trenching studies, may make it possible to refine the location and activity status of a fault. Not all faults may be shown. This map may be amended as new data become available and are validated.

Pre-quaternary faults are considered inactive and are not subject to the requirements of the Alquist-Priolo Earthquake Faults Zoning Act.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3

**Q:** B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Earthquakes in the City of Signal Hill** below.

### Impact of Earthquakes in the City of Signal Hill

Based on the risk assessment, it is evident that earthquakes will continue to have potentially devastating economic impacts to certain areas of the City. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life;
- ✓ Commercial and residential structural damage;
- ✓ Disruption of and damage to public infrastructure;
- ✓ Secondary health hazards e.g. mold and mildew;
- ✓ Damage to roads/bridges resulting in loss of mobility;
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community;
- ✓ Negative impact on commercial and residential property values; and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

### *Earthquake-Induced Landslides*

Earthquake-induced landslides are secondary earthquake hazards that occur from ground shaking. They can destroy the roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Southern California have a high likelihood of encountering such risks, especially in areas with steep slopes.

**Map: Landslide and Liquefaction Zones** shows the moderate risk of earthquake-induced landslide risk within the City. The areas found susceptible to landslides are found in the upper reaches of Signal Hill.

### *Liquefaction*

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other events. Liquefaction occurs in saturated soils, which are soils in which the space between individual soil particles is completely filled with water. This water exerts a pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, the water pressure is relatively low. However, earthquake shaking can cause the water pressure to increase to the point where the soil particles can readily move with respect to each other. Because liquefaction only occurs in saturated soil, its effects are most commonly observed in low lying areas. Typically, liquefaction is associated with shallow groundwater, which is less than 50 feet beneath the earth's surface.

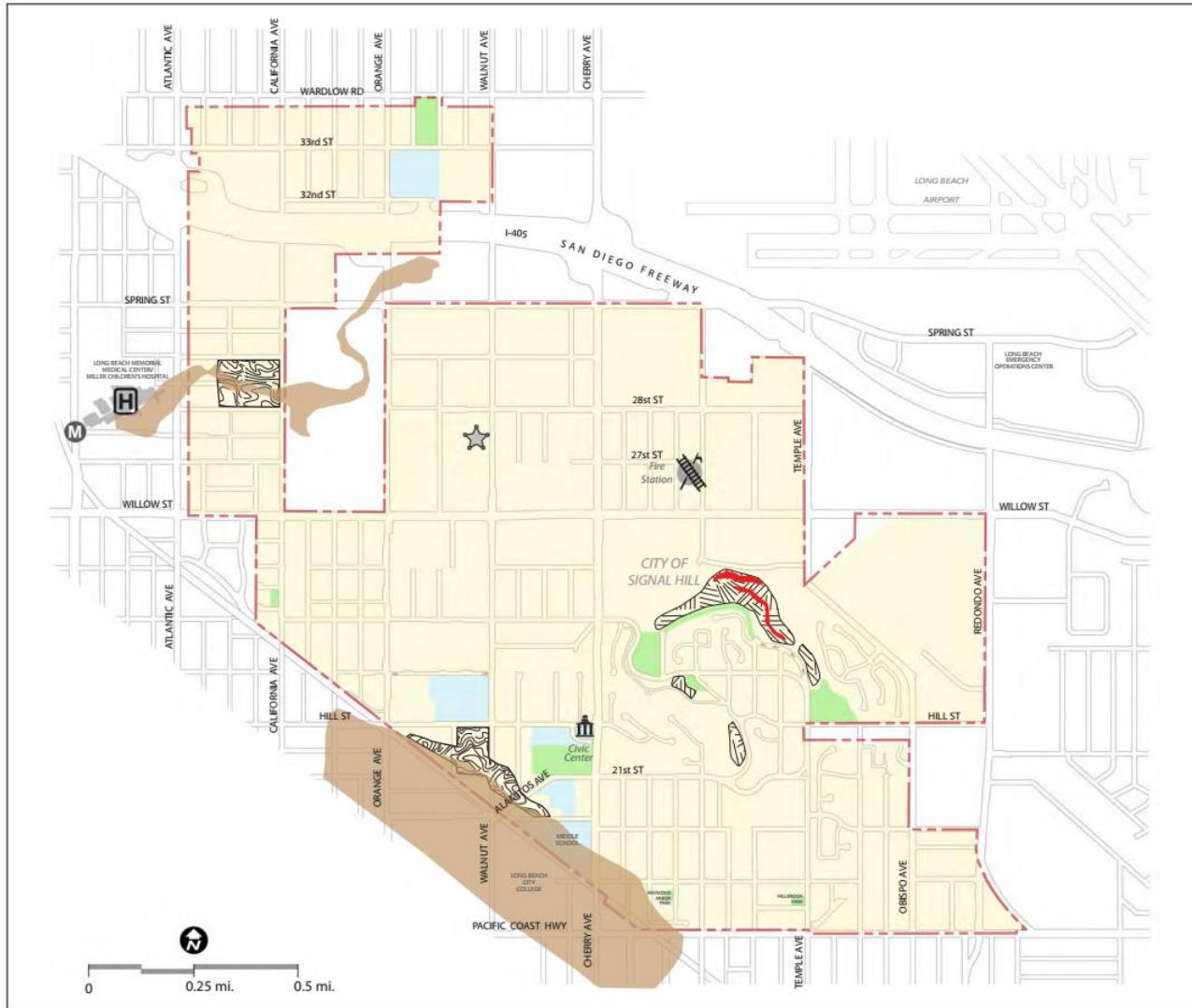
According to the City of Signal Hill General Plan - Safety Element (2016), only two small portions of the City are considered at risk from liquefaction. One area consists of a strip of land adjacent



to and under the Columbia Street right-of-way (part of which is currently used for oil production) between Atlantic and California Avenues. The second area is a narrow band along the southwestern border of the City, adjacent to the right-of-way of the former Pacific Electric Railway. Notably, this area of liquefaction risk includes a large portion of Chittick Field Park and Jessie Elwin Nelson Academy located at 1951 Cherry Avenue.

## Map: Landslide and Liquefaction Zones

(Source: City of Signal Hill General Plan – Safety Element 2016)



**City of Signal Hill**  
**GENERAL PLAN**

Safety Element  
October 2010

- - - City of Signal Hill Boundary
- █ Liquefaction Hazard
- █ Undeveloped Land with Liquefaction Potential
- █ Landslide Movement Hazard
- █ Undeveloped Land with Landslide Potential

Source: Prepared by Earth Consultants International with data from the California Division of Mines and Geology.



## Exposure

The data in this section was generated using the HAZUS-MH program for earthquakes. Once the location and size of a hypothetical earthquake are identified, HAZUS-MH estimates the intensity of the ground shaking, the number of buildings damaged, the number of casualties, the amount of damage to transportation systems and utilities, the number of people displaced from their homes, and the estimated cost of repair and clean up.

### *Building Inventory*

HAZUS estimates approximately 77% of the building stock within the City of Signal Hill is residential housing. In term of building construction types found in the region, wood frame construction makes up 79% of the building inventory.

### *Critical Facility Inventory*

HAZUS breaks critical facilities into two (2) groups: essential facilities and high potential loss facilities (HPL). Essential facilities include hospitals, medical clinics, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

**Table: Critical Facility Inventory – HAZUS**

Essential Facilities	Count	High Potential Loss (HPL) Facilities	Count
Hospitals	1	Dams	0
Schools	3	Levees	0
Fire Stations	1	Military Installations	0
Police Stations	1	Nuclear Power Plants	0
Emergency Operations Facilities	1	Hazardous Material Sites	7

### *Transportation and Utility Lifeline Inventory*

Within HAZUS, the lifeline inventory is divided between transportation and utility lifeline systems. Transportation systems include highways, railways, light rail, bus, ports, ferry and airports. Utility systems include potable water, wastewater, natural gas, crude & refined oil, electric power and communications.



## Casualties

HAZUS estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows:

- ✓ **Severity Level 1:** Injuries will require medical attention but hospitalization is not needed.
- ✓ **Severity Level 2:** Injuries will require hospitalization but are not considered life-threatening.
- ✓ **Severity Level 3:** Injuries will require hospitalization and can become life threatening if not promptly treated.
- ✓ **Severity Level 4:** Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

## Building-Related Losses

Building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.



# HAZUS Earthquake Event Summary Results

## Newport-Inglewood M7.1 Earthquake Scenario

### Building Damage

Table: Expected Building Damage by Occupancy – Newport-Inglewood M7.1

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Agriculture	1	3	3	2	1
Commercial	48	89	155	110	53
Education	2	2	3	1	1
Government	1	1	1	1	0
Industrial	17	33	66	50	26
Other Residential	70	129	99	29	12
Religion	3	5	7	5	2
Single Family	466	884	585	77	22
Total	608	1,146	919	275	117

Table: Expected Building Damage by Building Type – Newport-Inglewood M7.1

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Wood	543	1,038	701	98	30
Steel	12	21	53	45	22
Concrete	14	28	40	29	14
Precast	11	23	56	45	23
RM	26	30	56	44	16
URM	2	5	12	11	11
MH	0	0	1	2	1
Total	608	1,146	919	275	117



## Transportation and Utility Lifeline Damage

Table: Expected Utility System Pipeline Damage – Newport-Inglewood M7.1

System	Total Pipelines (Length km)	Number of Leaks	Number of Breaks
Potable Water	468	215	54
Waste Water	281	154	38
Natural Gas	187	44	11
Oil	0	0	0

Table: Potable Water and Electric Power System Performance – Newport-Inglewood M7.1

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	4,173	1,176	0	0	0	0
Electric Power		3,355	2,303	1,097	246	4

## Shelter Requirement

HAZUS estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 327 households to be displaced due to the earthquake. Of these, 201 people (out of a total population of 11,411) will seek temporary shelter in public shelters.



## Casualties

The table below represents a summary of casualties estimated for Newport-Inglewood M7.1 earthquake scenario.

**Table: Casualty Estimates – Newport-Inglewood M7.1**

Time	Sector	Level 1	Level 2	Level 3	Level 4
2AM	Commercial	1	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	1	0	0	0
	Other-Residential	22	6	1	2
	Single-Family	13	2	0	0
<b>TOTAL</b>		<b>37</b>	<b>8</b>	<b>1</b>	<b>2</b>
2PM	Commercial	64	19	3	6
	Commuting	0	0	1	0
	Educational	19	5	1	2
	Hotels	0	0	0	0
	Industrial	10	3	0	1
	Other-Residential	4	1	0	0
	Single-Family	3	0	0	0
<b>TOTAL</b>		<b>100</b>	<b>29</b>	<b>5</b>	<b>9</b>
5PM	Commercial	45	13	2	4
	Commuting	5	6	11	2
	Educational	2	1	0	0
	Hotels	0	0	0	0
	Industrial	6	2	0	1
	Other-Residential	8	2	0	1
	Single-Family	5	1	0	0
<b>TOTAL</b>		<b>72</b>	<b>24</b>	<b>14</b>	<b>8</b>



## Economic Losses

The total economic loss estimated for the Newport-Inglewood M7.1 earthquake scenario is **\$392.59 million dollars** which includes building and lifeline related losses based on the region's available inventory. The following tables provide more detailed information about these losses.

**Table: Building-Related Economic Losses (\$ Dollars) – Newport-Inglewood M7.1**

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
<b>Income Losses</b>	Wage	\$0	\$260,000	\$12,040,000	\$760,000	\$360,000	\$13,420,000
	Capital-Related	\$0	\$110,000	\$9,620,000	\$490,000	\$80,000	\$10,300,000
	Rental	\$1,020,000	\$3,120,000	\$8,680,000	\$240,000	\$110,000	\$13,170,000
	Relocation	\$3,920,000	\$2,200,000	\$13,010,000	\$1,310,000	\$1,180,000	\$21,620,000
	<b>Subtotal</b>	<b>\$4,940,000</b>	<b>\$5,690,000</b>	<b>\$43,340,000</b>	<b>\$2,800,000</b>	<b>\$1,730,000</b>	<b>\$58,500,000</b>
<b>Capital Stock Losses</b>	Structural	\$7,980,000	\$5,450,000	\$29,170,000	\$6,810,000	\$1,930,000	\$51,340,000
	Non-Structural	\$41,020,000	\$38,890,000	\$80,060,000	\$25,550,000	\$6,260,000	\$191,780,000
	Content	\$13,820,000	\$10,210,000	\$39,430,000	\$16,410,000	\$3,150,000	\$83,010,000
	Inventory	\$0	\$0	\$1,350,000	\$2,480,000	\$40,000	\$3,870,000
	<b>Subtotal</b>	<b>\$62,820,000</b>	<b>\$54,550,000</b>	<b>\$150,010,000</b>	<b>\$51,240,000</b>	<b>\$11,380,000</b>	<b>\$330,000,000</b>
	<b>TOTAL</b>	<b>\$67,760,000</b>	<b>\$60,240,000</b>	<b>\$193,350,000</b>	<b>\$54,040,000</b>	<b>\$13,110,000</b>	<b>\$388,500,000</b>



Table: Transportation System Economic Losses (\$ Dollars) – Newport-Inglewood M7.1

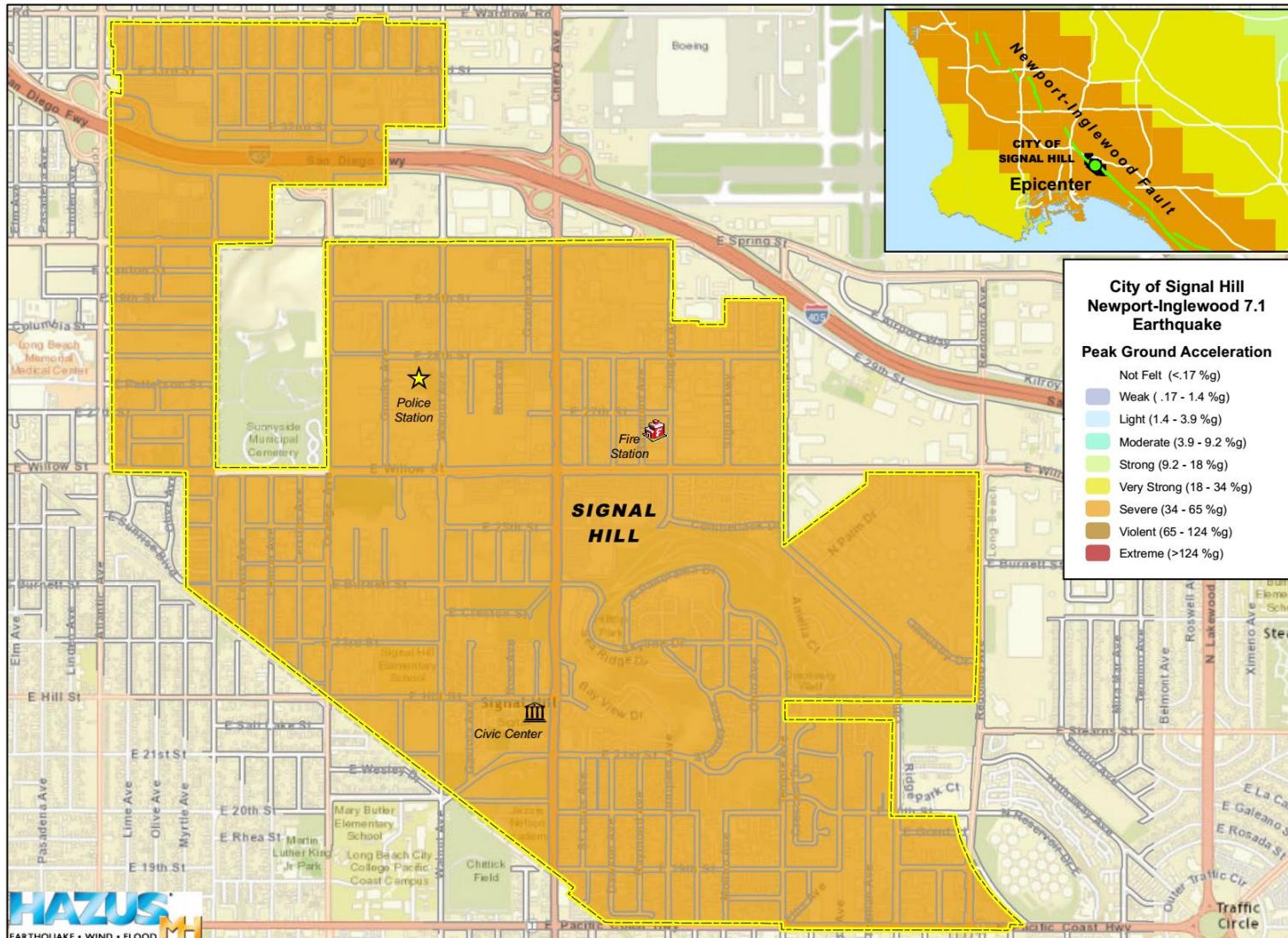
System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
Highway	Segments	\$49,000,000	\$0	0%
	Bridges	\$10,490,000	\$2,000,000	19%
	Tunnels	\$0	\$0	0%
Railways	Segments	\$5,030,000	\$0	0%
	Bridges	\$0	\$0	0%
	Tunnels	\$0	\$0	0%
Light Rail	Facilities	\$0	\$0	0%
	Segments	\$0	\$0	0%
	Bridges	\$0	\$0	0%
Bus	Tunnels	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Ferry	\$0	\$0	0%
Port	Facilities	\$0	\$0	0%
Airport	Facilities	\$0	\$0	0%
TOTAL		\$64,520,000	\$2,000,000	



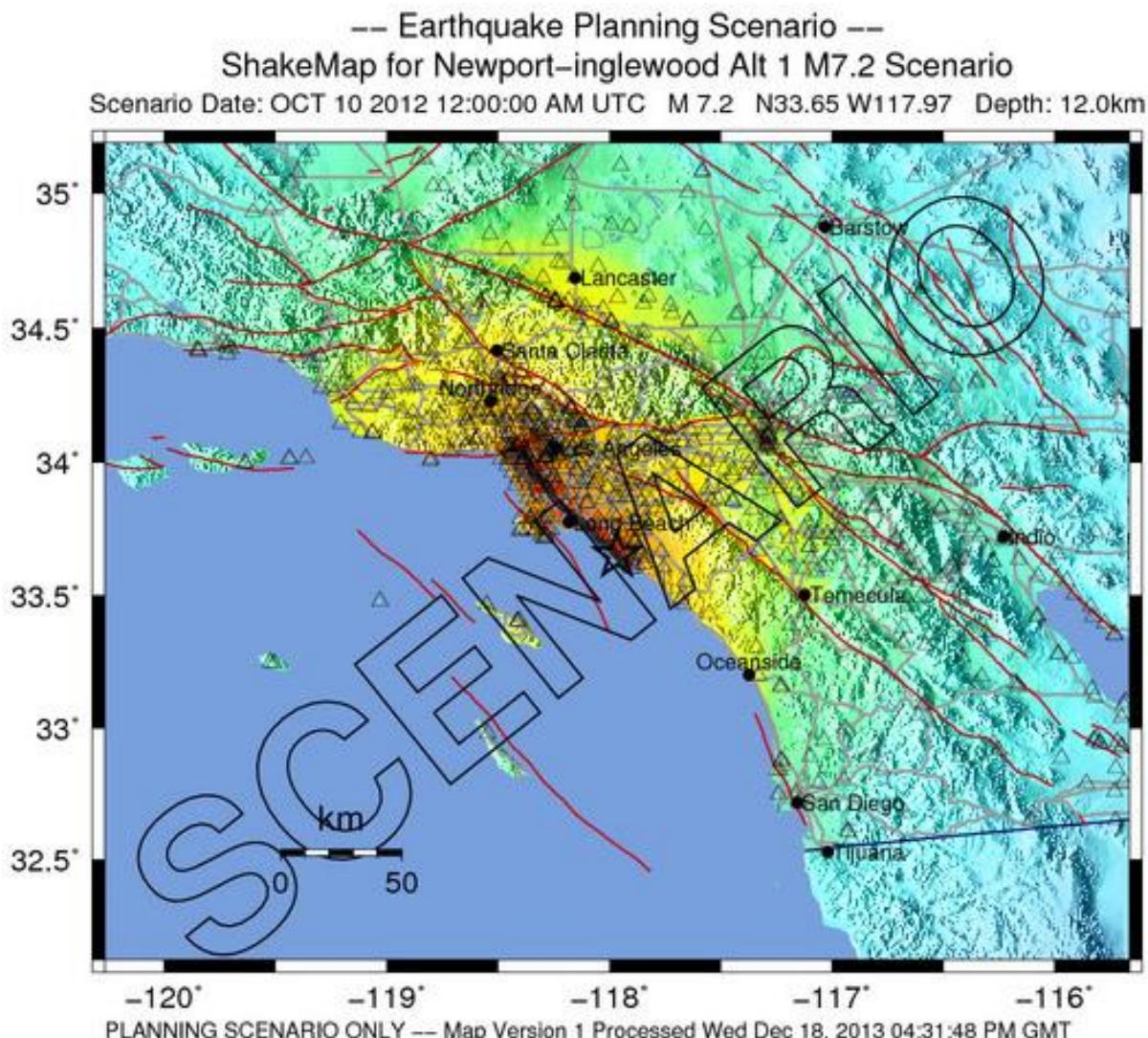
**Table: Utility System Economic Losses (\$ Dollars) – Newport-Inglewood M7.1**

System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
<b>Potable Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$9,400,000	\$970,000	10%
<b>Waste Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$5,600,000	\$690,000	12%
<b>Natural Gas</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$3,700,000	\$200,000	5%
<b>Oil Systems</b>	Pipelines	\$0	\$0	0%
	Facilities	\$500,000	\$180,000	39%
<b>Electrical Power</b>	Facilities	\$0	\$0	0%
<b>Communication</b>	Facilities	\$100,000	\$50,000	50%
<b>TOTAL</b>		<b>\$19,300,000</b>	<b>\$2,090,000</b>	

**Map: Shake Intensity Map – Newport-Inglewood M7.1**  
 (Source: Emergency Planning Consultants)



**Map: Seismic Shaking Intensities for the Newport-Inglewood M7.2**  
 (Source: State of California Department of Conservation)



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.1	0.5	2.4	6.7	13	24	44	83	>156
PEAK VEL.(cm/s)	<0.07	0.4	1.9	5.8	11	22	43	83	>160
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Wald, et al.; 1999



## San Andreas M8.0 Earthquake Scenario

### *Building Damage*

Table: Expected Building Damage by Occupancy – San Andreas M8.0

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Agriculture	9	1	0	0	0
Commercial	416	30	7	1	0
Education	8	0	0	0	0
Government	4	0	0	0	0
Industrial	168	16	7	1	0
Other Residential	326	11	1	0	0
Religion	20	1	0	0	0
Single Family	1,975	60	0	0	0
Total	2,927	119	16	2	0

Table: Expected Building Damage by Building Type – San Andreas M8.0

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Wood	2,334	75	1	0	0
Steel	127	15	9	2	0
Concrete	115	9	2	0	0
Precast	144	11	2	0	0
RM	167	4	1	0	0
URM	36	4	0	0	0
MH	3	1	0	0	0
Total	2,927	119	16	2	0



## Transportation and Utility Lifeline Damage

Table: Expected Utility System Pipeline Damage – San Andreas M8.0

System	Total Pipelines (Length km)	Number of Leaks	Number of Breaks
Potable Water	468	502	126
Waste Water	281	360	90
Natural Gas	187	103	26
Oil	0	0	0

Table: Potable Water and Electric Power System Performance – San Andreas M8.0

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	4,173	3,405	2,237	0	0	0
Electric Power		0	0	0	0	0

## Shelter Requirement

HAZUS estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the earthquake. Of these, 0 people (out of a total population of 11,411) will seek temporary shelter in public shelters.



## Casualties

The table below represents a summary of casualties estimated for San Andreas M8.0 earthquake scenario.

**Table: Casualty Estimates – San Andreas M8.0**

Time	Sector	Level 1	Level 2	Level 3	Level 4
2AM	Commercial	0	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	0	0	0	0
	Other-Residential	0	0	0	0
	Single-Family	0	0	0	0
<b>TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2PM	Commercial	0	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	0	0	0	0
	Other-Residential	0	0	0	0
	Single-Family	1	0	0	0
<b>TOTAL</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
5PM	Commercial	0	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	0	0	0	0
	Other-Residential	0	0	0	0
	Single-Family	1	0	0	0
<b>TOTAL</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>



## Economic Losses

The total economic loss estimated for the San Andreas M8.0 earthquake scenario is **\$11.79 million dollars** which includes building and lifeline related losses based on the region's available inventory. The following tables provide more detailed information about these losses.

**Table: Building-Related Economic Losses (\$ Dollars) – San Andreas M8.0**

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
<b>Income Losses</b>	Wage	\$0	\$0	\$280,000	\$30,000	\$10,000	\$310,000
	Capital-Related	\$0	\$0	\$200,000	\$20,000	\$0	\$220,000
	Rental	\$0	\$10,000	\$150,000	\$10,000	\$0	\$180,000
	Relocation	\$0	\$10,000	\$180,000	\$60,000	\$20,000	\$260,000
	<b>Subtotal</b>	<b>\$0</b>	<b>\$30,000</b>	<b>\$800,000</b>	<b>\$110,000</b>	<b>\$30,000</b>	<b>\$980,000</b>
<b>Capital Stock Losses</b>	Structural	\$80,000	\$40,000	\$360,000	\$220,000	\$40,000	\$740,000
	Non-Structural	\$630,000	\$560,000	\$1,680,000	\$700,000	\$140,000	\$3,710,000
	Content	\$240,000	\$170,000	\$940,000	\$400,000	\$70,000	\$1,820,000
	Inventory	\$0	\$0	\$30,000	\$60,000	\$0	\$90,000
	<b>Subtotal</b>	<b>\$940,000</b>	<b>\$780,000</b>	<b>\$3,020,000</b>	<b>\$1,380,000</b>	<b>\$240,000</b>	<b>\$6,360,000</b>
	<b>TOTAL</b>	<b>\$950,000</b>	<b>\$800,000</b>	<b>\$3,820,000</b>	<b>\$1,490,000</b>	<b>\$280,000</b>	<b>\$7,340,000</b>



Table: Transportation System Economic Losses (\$ Dollars) – San Andreas M8.0

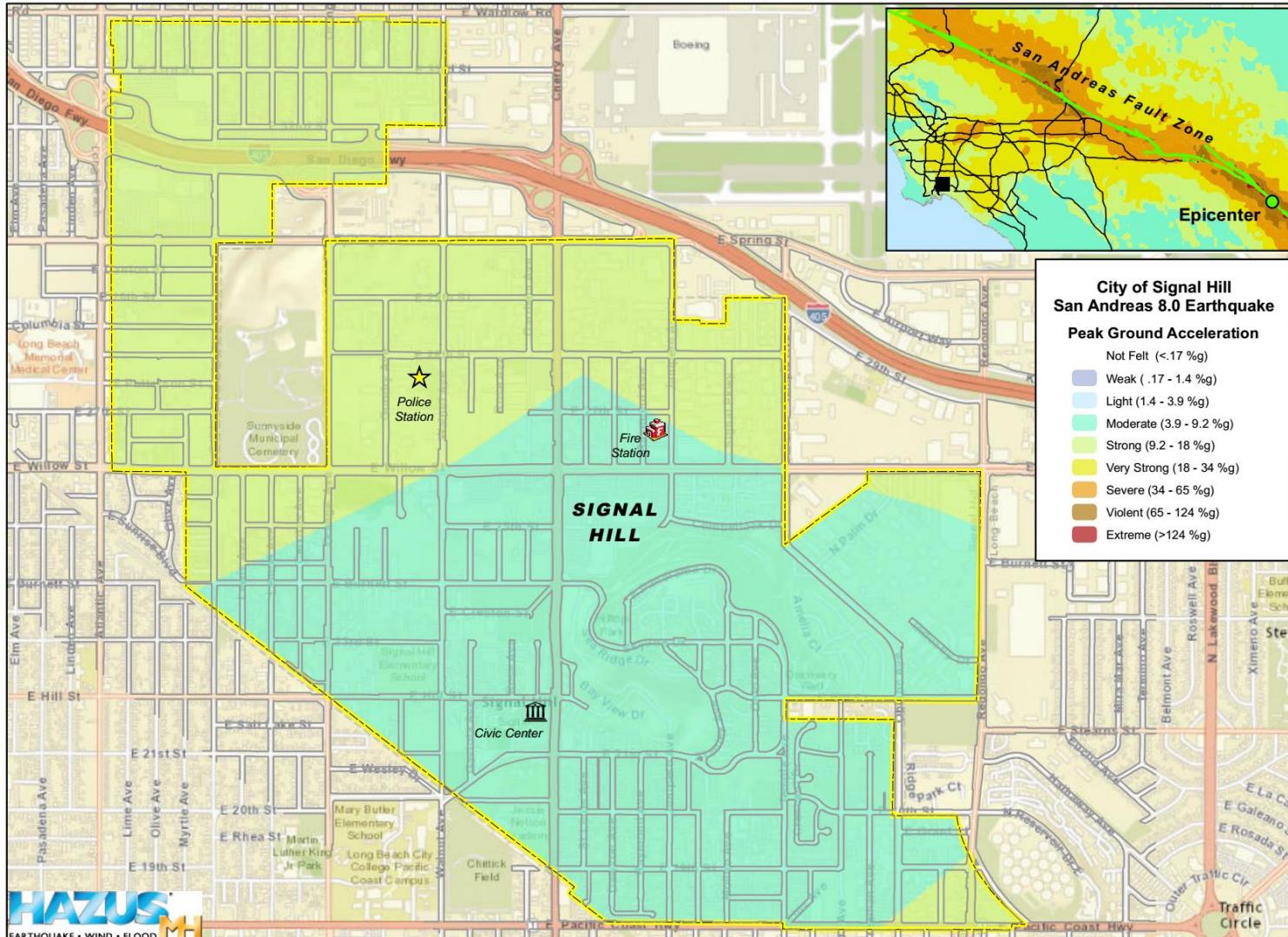
System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
Highway	Segments	\$49,000,000	\$0	0%
	Bridges	\$10,490,000	\$90,000	1%
	Tunnels	\$0	\$0	0%
Railways	Segments	\$5,030,000	\$0	0%
	Bridges	\$0	\$0	0%
	Tunnels	\$0	\$0	0%
Light Rail	Segments	\$0	\$0	0%
	Bridges	\$0	\$0	0%
	Tunnels	\$0	\$0	0%
Bus	Facilities	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Facilities	\$0	\$0	0%
Airport	Facilities	\$0	\$0	0%
TOTAL		\$64,520,000	\$90,000	



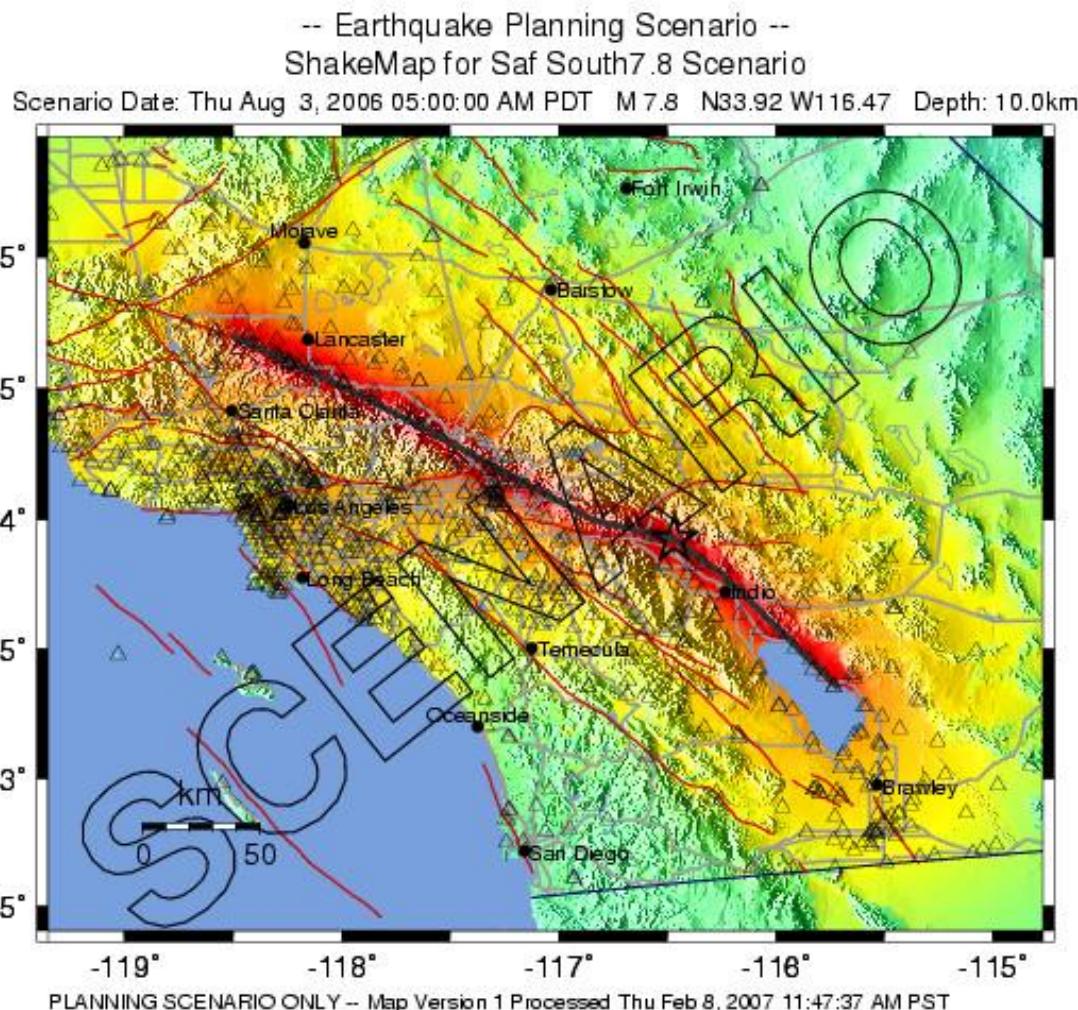
Table: Utility System Economic Losses (\$ Dollars) – San Andreas M8.0

System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
<b>Potable Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$9,400,000	\$2,260,000	24%
<b>Waste Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$5,600,000	\$1,620,000	29%
<b>Natural Gas</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$3,700,000	\$460,000	12%
<b>Oil Systems</b>	Pipelines	\$0	\$0	0%
	Facilities	\$500,000	\$10,000	2%
<b>Electrical Power</b>	Facilities	\$0	\$0	0%
<b>Communication</b>	Facilities	\$100,000	\$0	0%
<b>TOTAL</b>		<b>\$19,300,000</b>	<b>\$4,350,000</b>	

Map: Shake Intensity Map – San Andreas M8.0  
(Source: Emergency Planning Consultants)



**Map: Seismic Shaking Intensities for the San Andrea Fault M7.8**  
 (Source: State of California Department of Conservation)



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<.17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+



## Puente Hills M7.1 Earthquake Scenario

### *Building Damage*

Table: Expected Building Damage by Occupancy – Puente Hills M7.1

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Agriculture	5	3	2	1	0
Commercial	202	114	99	33	6
Education	5	2	1	0	0
Government	2	1	1	0	0
Industrial	79	47	46	17	4
Other Residential	186	106	38	7	1
Religion	11	6	4	1	0
Single Family	1,163	682	178	9	2
Total	1,653	961	369	69	14

Table: Expected Building Damage by Building Type – Puente Hills M7.1

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Wood	1,365	810	220	13	3
Steel	58	36	42	15	3
Concrete	56	33	25	10	2
Precast	64	37	39	14	2
RM	94	33	31	12	1
URM	15	11	10	4	1
MH	1	1	2	1	0
Total	1,653	961	369	69	14



## Transportation and Utility Lifeline Damage

Table: Expected Utility System Pipeline Damage – Puente Hills M7.1

System	Total Pipelines (Length km)	Number of Leaks	Number of Breaks
Potable Water	468	61	15
Waste Water	281	44	11
Natural Gas	187	13	3
Oil	0	0	0

Table: Potable Water and Electric Power System Performance – Puente Hills M7.1

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	4,173	0	0	0	0	0
Electric Power		0	0	0	0	0

## Shelter Requirement

HAZUS estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 63 households to be displaced due to the earthquake. Of these, 38 people (out of a total population of 11,411) will seek temporary shelter in public shelters.



## Casualties

The table below represents a summary of casualties estimated for the Puente Hills M7.1 earthquake scenario.

**Table: Casualty Estimates – Puente Hills M7.1**

Time	Sector	Level 1	Level 2	Level 3	Level 4
2AM	Commercial	0	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	0	0	0	0
	Other-Residential	4	1	0	0
	Single-Family	3	0	0	0
<b>TOTAL</b>		<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>
2PM	Commercial	12	3	0	1
	Commuting	0	0	0	0
	Educational	4	1	0	0
	Hotels	0	0	0	0
	Industrial	2	0	0	0
	Other-Residential	1	0	0	0
	Single-Family	1	0	0	0
<b>TOTAL</b>		<b>19</b>	<b>4</b>	<b>0</b>	<b>1</b>
5PM	Commercial	8	2	0	0
	Commuting	1	1	2	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	1	0	0	0
	Other-Residential	2	0	0	0
	Single-Family	1	0	0	0
<b>TOTAL</b>		<b>14</b>	<b>3</b>	<b>2</b>	<b>0</b>



## Economic Losses

The total economic loss estimated for the Puente Hills M7.1 scenario earthquake is **\$113.03 million dollars** which includes building and lifeline related losses based on the region's available inventory. The following tables provide more detailed information about these losses.

**Table: Building-Related Economic Losses (\$ Dollars) – Puente Hills M7.1**

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
<b>Income Losses</b>	Wage	\$0	\$70,000	\$3,640,000	\$240,000	\$120,000	\$4,070,000
	Capital-Related	\$0	\$30,000	\$2,820,000	\$150,000	\$20,000	\$3,020,000
	Rental	\$260,000	\$10,000	\$2,840,000	\$90,000	\$30,000	\$4,050,000
	Relocation	\$950,000	\$600,000	\$4,310,000	\$530,000	\$350,000	\$6,740,000
	<b>Subtotal</b>	<b>\$1,210,000</b>	<b>\$1,530,000</b>	<b>\$13,610,000</b>	<b>\$1,010,000</b>	<b>\$520,000</b>	<b>\$17,880,000</b>
<b>Capital Stock Losses</b>	Structural	\$2,260,000	\$1,510,000	\$8,100,000	\$2,080,000	\$550,000	\$14,500,000
	Non-Structural	\$12,730,000	\$11,320,000	\$21,740,000	\$7,150,000	\$1,760,000	\$54,700,000
	Content	\$4,390,000	\$3,040,000	\$10,980,000	\$4,560,000	\$900,000	\$23,870,000
	Inventory	\$0	\$0	\$370,000	\$690,000	\$10,000	\$1,070,000
	<b>Subtotal</b>	<b>\$19,380,000</b>	<b>\$15,870,000</b>	<b>\$41,190,000</b>	<b>\$14,480,000</b>	<b>\$3,220,000</b>	<b>\$94,140,000</b>
<b>TOTAL</b>		<b>\$20,590,000</b>	<b>\$17,400,000</b>	<b>\$54,800,000</b>	<b>\$15,490,000</b>	<b>\$3,740,000</b>	<b>\$112,020,000</b>



Table: Transportation System Economic Losses (\$ Dollars) – Puente Hills M7.1

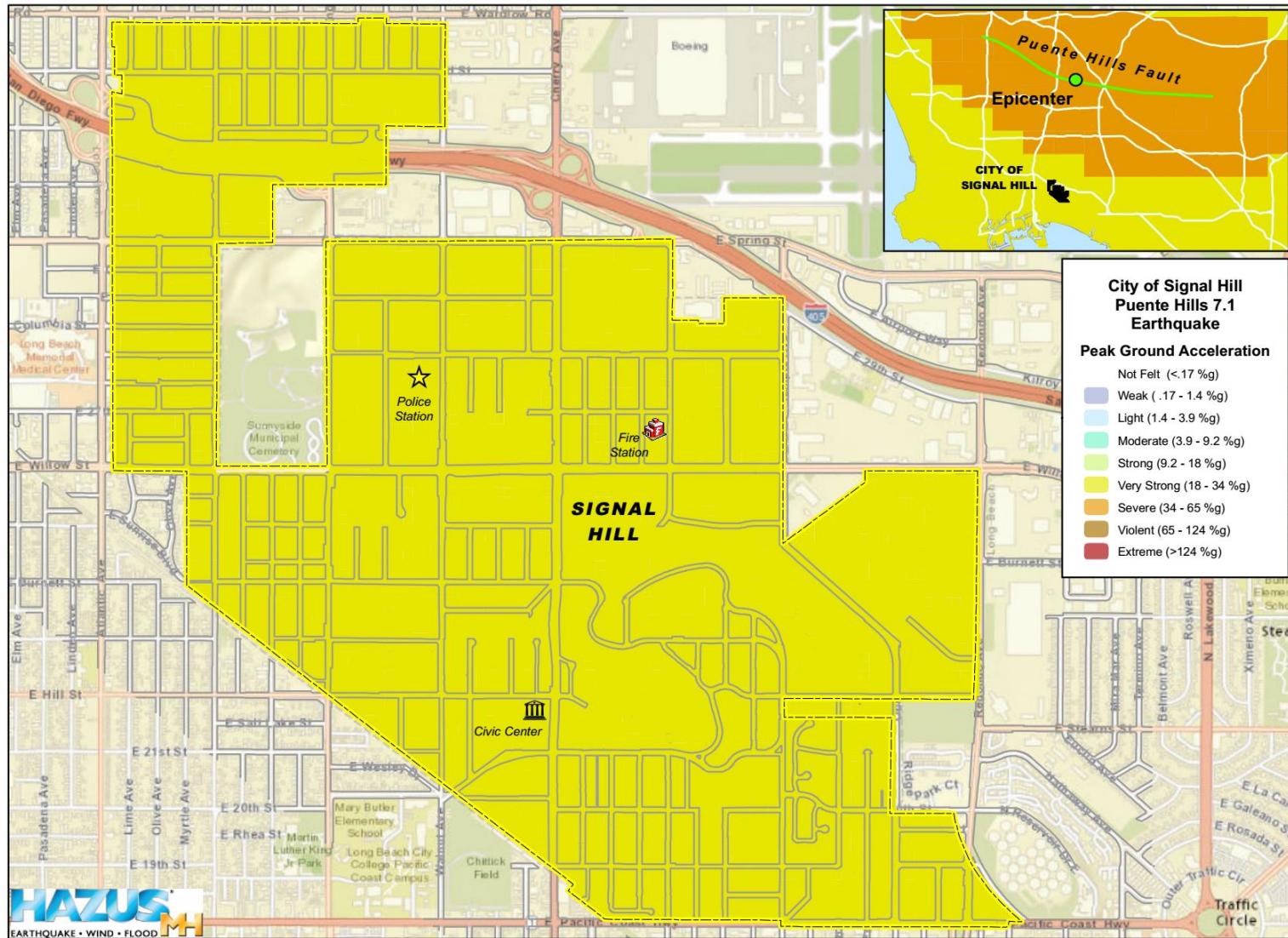
System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
Highway	Segments	\$49,000,000	\$0	0%
	Bridges	\$10,490,000	\$390,000	4%
	Tunnels	\$0	\$0	0%
Railways	Segments	\$5,030,000	\$0	0%
	Bridges	\$0	\$0	0%
	Tunnels	\$0	\$0	0%
Light Rail	Facilities	\$0	\$0	0%
	Segments	\$0	\$0	0%
	Bridges	\$0	\$0	0%
Bus	Tunnels	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Ferry	\$0	\$0	0%
Port	Facilities	\$0	\$0	0%
Airport	Facilities	\$0	\$0	0%
TOTAL		\$64,520,000	\$390,000	



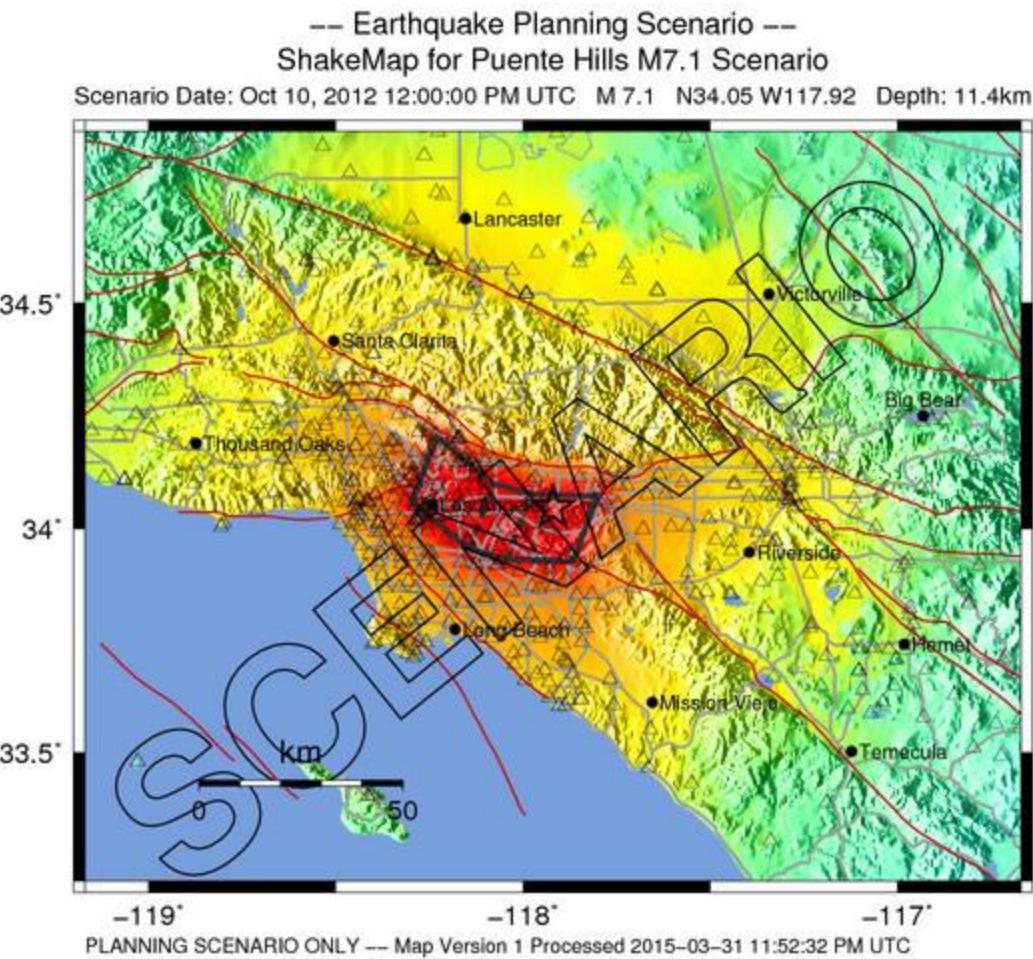
Table: Utility System Economic Losses (\$ Dollars) – Puente Hills M7.1

System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
<b>Potable Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$9,400,000	\$280,000	3%
<b>Waste Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$5,600,000	\$200,000	4%
<b>Natural Gas</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$3,700,000	\$60,000	2%
<b>Oil Systems</b>	Pipelines	\$0	\$0	0%
	Facilities	\$500,000	\$70,000	14%
<b>Electrical Power</b>	Facilities	\$0	\$0	0%
<b>Communication</b>	Facilities	\$100,000	\$20,000	20%
<b>TOTAL</b>		<b>\$19,300,000</b>	<b>\$630,000</b>	

**Map: Shake Intensity Map – Puente Hills M7.1**  
 (Source: Emergency Planning Consultants)



**Map: Seismic Shaking Intensities for the Puente Hills M7.1**  
 (Source: State of California Department of Conservation)



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.1	0.5	2.4	6.7	13	24	44	83	>156
PEAK VEL.(cm/s)	<0.07	0.4	1.9	5.8	11	22	43	83	>160
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Wald, et al.; 1999



## Whittier M6.8 Earthquake Scenario

### *Building Damage*

Table: Expected Building Damage by Occupancy – Whittier M6.8

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Agriculture	9	1	0	0	0
Commercial	401	46	7	0	0
Education	8	1	0	0	0
Government	4	0	0	0	0
Industrial	167	22	4	0	0
Other Residential	309	27	2	0	0
Religion	20	2	0	0	0
Single Family	1,879	154	2	0	0
Total	2,796	253	15	0	0

Table: Expected Building Damage by Building Type – Whittier M6.8

	None	Slight	Moderate	Extensive	Complete
	Count	Count	Count	Count	Count
Wood	2,224	184	2	0	0
Steel	135	15	4	0	0
Concrete	112	13	2	0	0
Precast	130	22	5	0	0
RM	161	10	2	0	0
URM	32	7	1	0	0
MH	3	1	0	0	0
Total	2,796	253	15	0	0



## Transportation and Utility Lifeline Damage

Table: Expected Utility System Pipeline Damage – Whittier M6.8

System	Total Pipelines (Length km)	Number of Leaks	Number of Breaks
Potable Water	468	502	126
Waste Water	281	360	90
Natural Gas	187	103	26
Oil	0	0	0

Table: Potable Water and Electric Power System Performance – Whittier M6.8

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	4,173	3,405	2,237	0	0	0
Electric Power		0	0	0	0	0

## Shelter Requirement

HAZUS estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the earthquake. Of these, 0 people (out of a total population of 11,411) will seek temporary shelter in public shelters.



## Casualties

The table below represents a summary of casualties estimated for Whittier M6.8 earthquake scenario.

**Table: Casualty Estimates – Whittier M6.8**

Time	Sector	Level 1	Level 2	Level 3	Level 4
2AM	Commercial	0	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	0	0	0	0
	Other-Residential	0	0	0	0
	Single-Family	0	0	0	0
<b>TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2PM	Commercial	0	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	0	0	0	0
	Other-Residential	0	0	0	0
	Single-Family	1	0	0	0
<b>TOTAL</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
5PM	Commercial	0	0	0	0
	Commuting	0	0	0	0
	Educational	0	0	0	0
	Hotels	0	0	0	0
	Industrial	0	0	0	0
	Other-Residential	0	0	0	0
	Single-Family	1	0	0	0
<b>TOTAL</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>



## Economic Losses

The total economic loss estimated for the Whittier M6.8 earthquake scenario is **\$19.40 million dollars** which includes building and lifeline related losses based on the region's available inventory. The following tables provide more detailed information about these losses.

**Table: Building-Related Economic Losses (\$ Dollars) – Whittier M6.8**

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
<b>Income Losses</b>	Wage	\$0	\$1,000	\$121,300	\$10,500	\$8,000	\$140,800
	Capital-Related	\$0	\$400	\$96,500	\$6,600	\$1,300	\$104,800
	Rental	\$8,600	\$38,900	\$164,300	\$4,900	\$1,000	\$217,700
	Relocation	\$8,800	\$15,800	\$158,000	\$29,900	\$8,400	\$220,900
	<b>Subtotal</b>	<b>\$17,400</b>	<b>\$56,100</b>	<b>\$540,100</b>	<b>\$51,900</b>	<b>\$18,700</b>	<b>\$684,200</b>
<b>Capital Stock Losses</b>	Structural	\$202,300	\$106,000	\$403,500	\$118,900	\$23,900	\$854,600
	Non-Structural	\$1,782,200	\$1,714,400	\$3,332,600	\$1,332,400	\$249,700	\$8,411,300
	Content	\$797,600	\$585,900	\$2,361,900	\$917,100	\$183,000	\$4,845,500
	Inventory	\$0	\$0	\$79,400	\$138,900	\$2,100	\$220,400
	<b>Subtotal</b>	<b>\$2,782,100</b>	<b>\$2,406,300</b>	<b>\$6,177,400</b>	<b>\$2,507,300</b>	<b>\$458,700</b>	<b>\$14,331,800</b>
	<b>TOTAL</b>	<b>\$2,799,500</b>	<b>\$2,462,400</b>	<b>\$6,717,500</b>	<b>\$2,559,200</b>	<b>\$477,400</b>	<b>\$15,016,000</b>



Table: Transportation System Economic Losses (\$ Dollars) – Whittier M6.8

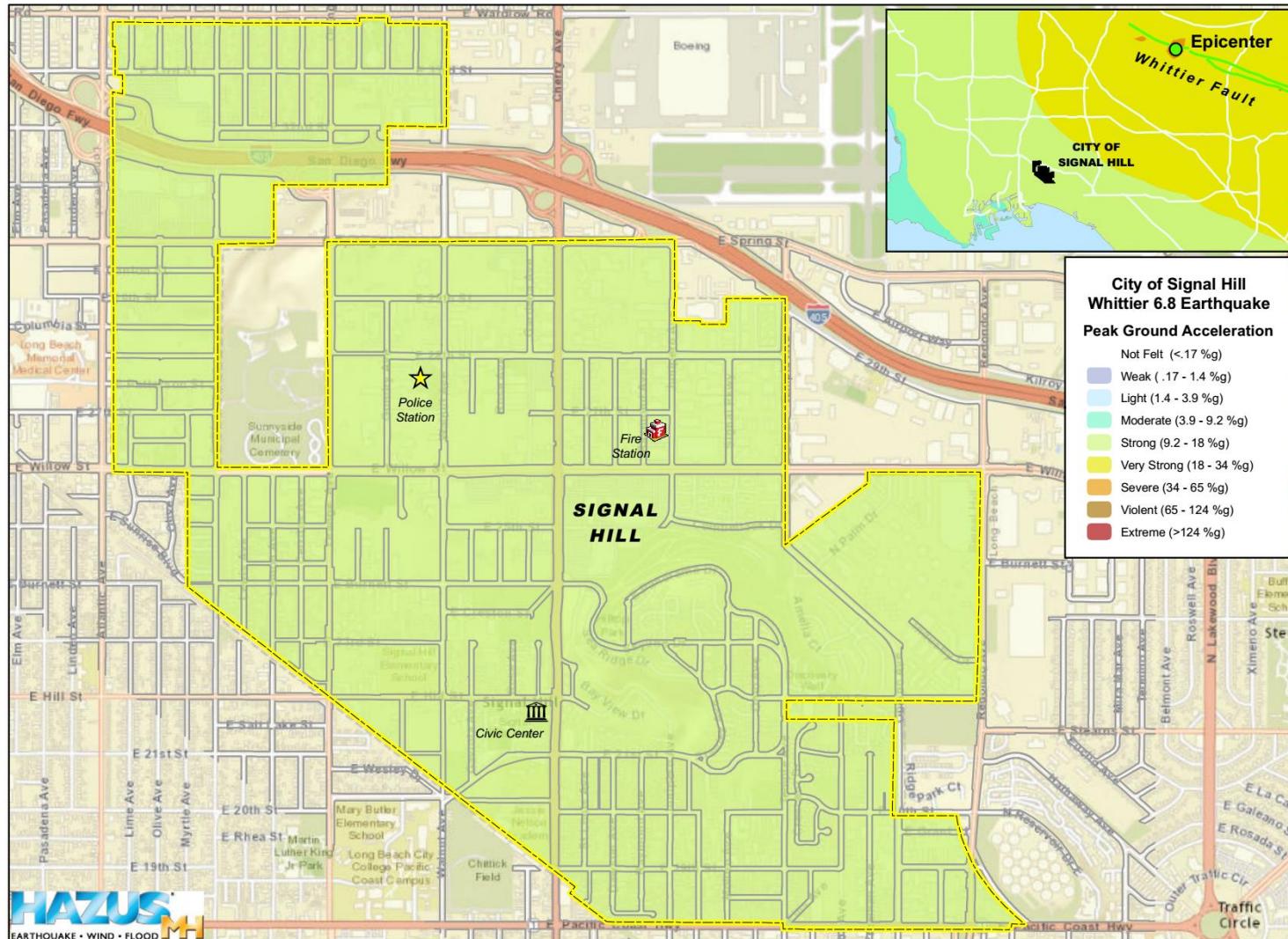
System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
Highway	Segments	\$49,000,000	\$0	0%
	Bridges	\$10,490,000	\$11,700	1%
	Tunnels	\$0	\$0	0%
Railways	Segments	\$5,030,000	\$0	0%
	Bridges	\$0	\$0	0%
	Tunnels	\$0	\$0	0%
Light Rail	Facilities	\$0	\$0	0%
	Segments	\$0	\$0	0%
	Bridges	\$0	\$0	0%
Bus	Tunnels	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Ferry	\$0	\$0	0%
Port	Facilities	\$0	\$0	0%
Airport	Facilities	\$0	\$0	0%
<b>TOTAL</b>		<b>\$64,520,000</b>	<b>\$11,700</b>	



Table: Utility System Economic Losses (\$ Dollars) – Whittier M6.8

System	Component	Total Inventory Value	Economic Loss	Loss Ratio %
<b>Potable Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$9,400,000	\$2,259,700	24%
<b>Waste Water</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$5,600,000	\$1,619,400	29%
<b>Natural Gas</b>	Pipelines	\$0	\$0	0%
	Facilities	\$0	\$0	0%
	Distribution Lines	\$3,700,000	\$464,500	12%
<b>Oil Systems</b>	Pipelines	\$0	\$0	0%
	Facilities	\$500,000	\$22,800	5%
<b>Electrical Power</b>	Facilities	\$0	\$0	0%
<b>Communication</b>	Facilities	\$100,000	\$5,700	6%
<b>TOTAL</b>		<b>\$19,300,000</b>	<b>\$4,372,100</b>	

Map: Shake Intensity Map – Whittier M6.8  
(Source: Emergency Planning Consultants)





## *Structures and Building Code*

The built environment is susceptible to damage from earthquakes. Buildings that collapse can trap and bury people. Lives are at risk, and the cost to clean up the damages is great. In most California communities, including the City of Signal Hill, many buildings were built before 1993 when building codes were not as strict. In addition, retrofitting is not required except under certain conditions and can be expensive. Therefore, the number of buildings at risk remains high. The California Seismic Safety Commission makes annual reports on the progress of the retrofitting of unreinforced masonry buildings. According to the City of Signal Hill General Plan – Safety Element (2016), all URM buildings within the City have been identified and upgraded to meet current requirements.

Implementation of earthquake mitigation policy most often takes place at the local government level. The City of Signal Hill Building Safety Department enforces building codes pertaining to earthquake hazards.

Additionally, the City has implemented basic building requirements that are above and beyond what the State demands for hazard mitigation. Newly constructed buildings in Signal Hill that are built in an area subject to Earthquake-induced landslide or liquefaction are typically built with extra foundation support. Such support is found in the post-tension reinforced concrete foundation; this same technique is used by coastal cities to prevent home destruction during cases of liquefaction.

Generally, these codes seek to discourage development in areas that could be prone to flooding, landslide, wildfire and/or seismic hazards; and where development is permitted, that the applicable construction standards are met. Developers in hazard-prone areas may be required to retain a qualified professional engineer to evaluate level of risk on the site and recommend appropriate mitigation measures.



# Landslide Hazards

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2

**Q:** B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Landslides in the City of Signal Hill** below.

### Previous Occurrences of Landslides in the City of Signal Hill

Signal Hill was most recently impacted in 1995 when a portion of Panorama Drive collapsed due to undermining of the asphalt roadway by heavy rains.

Since the writing of the 2012 Mitigation Plan, there have been no significant landslide events in the City of Signal Hill.

### Local Conditions

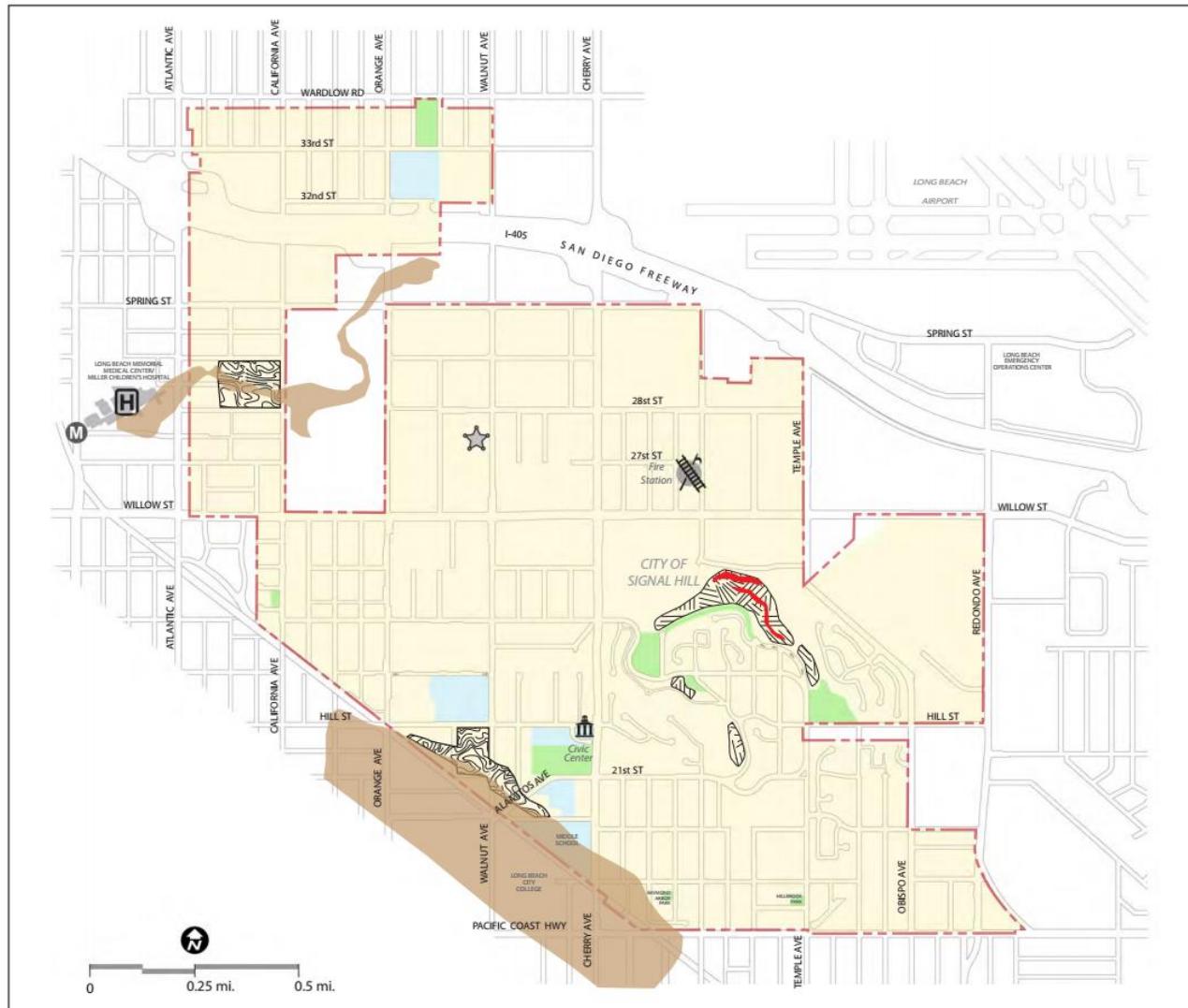
According to the City of Signal Hill General Plan – Safety Element (2016), landslides can result from earthquake-related ground shaking or failure of steep slopes due to water saturation or unstable soil conditions. Landslides can overrun structures and other property, and cause human injury or death. They can sever utility lines and block roads, thereby hindering rescue operations following an earthquake. The Seismic Hazards Mapping Act requires identification of landslide zones in which the stability of hill slopes must be evaluated. Areas that previously experienced landslide movement and/or local topographic, geological, geotechnical, and groundwater conditions may indicate the potential for future, permanent ground displacements. If confirmed during site geotechnical analyses, site mitigation would be required.

The areas found susceptible to landslides are found in the upper reaches of Signal Hill. Development, mostly completed over the past decade, is located both above and below areas at risk of landslides. Geotechnical analyses were prepared for these developments, and risks associated with landslides were mitigated to reduce their potential impacts. As shown on **Map: Landslide Hazard Areas**, two areas remain with landslide potential in the city, located north of Panorama Promenade and southwest of Sunset View Park.



## Map: Landslide Hazard Areas

(Source: City of Signal Hill General Plan – Safety Element 2016)



City of Signal Hill  
**GENERAL PLAN**

Safety Element  
October 2010

- - - City of Signal Hill Boundary
- Liquefaction Hazard
- Undeveloped Land with Liquefaction Potential
- Landslide Movement Hazard
- Undeveloped Land with Landslide Potential

Source: Prepared by Earth Consultants International with data from the California Division of Mines and Geology.



## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3

**Q:** B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Impacts of Landslides in the City of Signal Hill** below.

### Impacts of Landslides in the City of Signal Hill

Based on the risk assessment, it is evident that landslides continue to have potentially devastating economic impact to certain areas of the City.

Impacts that is not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life
- ✓ Commercial and residential structural damage
- ✓ Disruption of and damage to public infrastructure
- ✓ Secondary health hazards e.g. mold and mildew
- ✓ Damage to roads/bridges resulting in loss of mobility
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed

# Windstorm Hazards

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2

**Q:** B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Windstorms in the City of Signal Hill** below.

### Previous Occurrences of Windstorms in the City of Signal Hill

Severe windstorms pose a significant risk to life and property in the City of Signal Hill by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds can and do occasionally cause tornado-like damage to local homes and businesses in and near the community. High winds have destructive impact, especially to trees, power lines, and utility services.

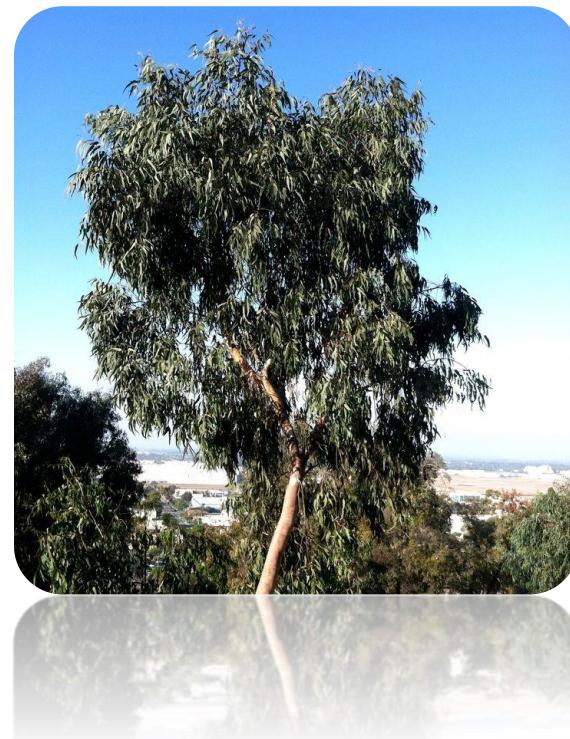
Since the writing of the 2012 Mitigation Plan, there have been no significant windstorm events in the City of Signal Hill.

### Local Conditions

According to the City, Signal Hill is at increased risk of windstorm damage – especially from falling trees.

Recent drought conditions have significantly increased the vulnerability of trees due to lack of necessary water. Additionally, eucalyptus trees within Signal Hill are specifically and currently prone to pest infestation. The infected, dying trees are increasingly vulnerable to severe Santa Ana wind conditions.

Historically, high wind conditions have caused injury, death, property damage, and fanned wild fires. Windstorms with significant intensity have been responsible for the sinking of watercraft and the downing of aircraft resulting in the loss of life. The most common wind condition is a Santa Ana Wind. This condition has generated winds that have exceeded 100 mph. Wind velocities of up to 111 mph have been generated from the same Santa Ana wind, resulting in the loss of life due to flying debris.





## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3

**Q:** B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Impacts of Windstorms in the City of Signal Hill** below.

### Impacts of Windstorms in the City of Signal Hill

Based on the risk assessment, it is evident that Windstorms continue to have potentially devastating economic impact to certain areas of the City.

Impacts that is not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life
- ✓ Commercial and residential structural damage
- ✓ Disruption of and damage to public infrastructure
- ✓ Secondary Health hazards e.g. mold and mildew
- ✓ Damage to roads/bridges resulting in loss of mobility
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

# Drought Hazards

## **Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2**

**Q:** B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Drought in the City of Signal Hill** below.

### **Previous Occurrences of Drought in the City of Signal Hill**

Fortunately, there is no history of severe drought within the City of Signal Hill. Although there is no evidence of a drought having a significant impact on the City at the current time, California as a whole has experienced a serious drought since 2012.

Since the writing of the 2012 Mitigation Plan, there have been no significant damages to the City from a drought.

### **Previous Occurrences of Drought in Los Angeles County**

The region's Mediterranean climate makes it especially susceptible to variations in rainfall. Though the potential risk to the City of Signal Hill is in no way unique, severe water shortages could have a bearing on the economic well-being of the community. Comparison of climate (rainfall) records from Los Angeles with water well records beginning in 1930 from the San Gabriel Valley indicates the existence of wet and dry cycles on a 10-year scale as well as for much longer periods. The climate record for the Los Angeles region beginning in 1890 suggests drying conditions over the last century. With respect to the present day, climate data also suggests that the last significant wet period was the 1940s. Well level data and other sources seem to indicate the historic high groundwater levels (reflecting recharge from rainfall) occurred in the same decade. Since that time, rainfall (and groundwater level trends) appears to be in decline. This slight declining trend, however, is not believed to be significant. Climatologists compiled rainfall data from 96 stations in the State that spanned a 100-year period between 1890 and 1990. An interesting note is that during the first 50 years of the reporting period, there was only one year (1890) that had more than 35 inches of rainfall, whereas the second 50-year period recording of 5 year intervals (1941, 1958, 1978, 1982, and 1983) that exceeded 35 inches of rainfall in a single year. The year of maximum rainfall was 1890 when the average annual rainfall was 43.11 inches. The second wettest year on record occurred in 1983 when the State's average was 42.75 inches.

The driest year of the 100-year reported in the study was 1924 when the State's average rainfall was only 10.50 inches. The region with the most stations reporting the driest year in 1924 was the San Francisco Bay area. The second driest year was 1977 when the average was 11.57 inches. The most recent major drought (1987 to 1990) occurred at the end of a sequence of very wet years (1978 to 1983). The debate continues whether "global warming" is occurring, and the degree to which global climate change will have an effect on local micro-climates. The semi-arid southwest is particularly susceptible to variations in rainfall. A study that documented annual precipitation for California since 1600 from reconstructed tree ring data indicates that there was a prolonged dry spell from about 1755 to 1820 in California. Fluctuations in precipitation could contribute indirectly to a number of hazards including wildfire and the availability of water supplies.

### **Local Conditions**



According to the City of Signal Hill General Plan – Circulation Element (2009), the City's primary water supply comes from two groundwater wells located in north Long Beach. Additional water may be purchased from the Metropolitan Water District of Southern California.

The City has drilled a third groundwater well centrally located within Signal Hill and is in the process of developing plans and specifications for the necessary pumping and treatment facilities. The City has three storage reservoirs and pumping facilities, providing water for domestic purposes and firefighting. The Gundry reservoir and pumping facility was constructed in 1929 and has a storage capacity of 4.7 million gallons. This facility is located in the northern part of the city. Two hilltop reservoirs and pumping facilities were constructed in the late 1990s, having a combined storage capacity of 2.6 million gallons.

A significant drought has hit the state of California since 2012. The drought has depleted reservoir levels all across the state. In January of 2014, Governor Brown declared a state of emergency and directed state officials to take all necessary actions to prepare for water shortages. As the drought prolonged into 2015, to help cope with the drought, Governor Brown gave an executive order in April 2015 which mandated a statewide 25 percent reduction in water use. In January of 2016, the DWR and the U.S. Bureau of Reclamation have finalized the 2016 Drought Contingency Plan that outlines State Water Project and Central Valley Project operations for February 2016 to November 2016. The plan was developed in coordination with staff from State and federal agencies. Although the drought has more significantly impacted surface waters and other agencies that use water for agriculture, the City of Signal Hill is still affected by the drought, primarily due to reduced reliability of imported water.

#### **Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3**

**Q:** B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Impacts of Drought in the City of Signal Hill** below.

### **Impacts of Drought in the City of Signal Hill**

Based on the risk assessment, it is evident that drought events continue to have potentially devastating economic impacts to certain areas of the City.

Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life
- ✓ Disruption of and damage to public infrastructure
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values
- ✓ Uncontrolled fires and associated injuries and damage

## PART III: MITIGATION STRATEGIES

### Mitigation Strategies

#### Overview of Mitigation Strategy

As the cost of damage from natural disasters continues to increase nationwide, the City of Signal Hill recognizes the importance of identifying effective ways to reduce vulnerability to disasters. Mitigation Plans assist communities in reducing risk from natural hazards by identifying resources, information and strategies for risk reduction, while helping to guide and coordinate mitigation activities throughout the City.

The plan provides a set of action items to reduce risk from natural hazards through education and outreach programs, and to foster the development of partnerships. Further, the plan provides for the implementation of preventative activities, including programs that restrict and control development in areas subject to damage from natural hazards.

The resources and information within the Mitigation Plan:

1. Establish a basis for coordination and collaboration among agencies and the public in the City of Signal Hill;
2. Identify and prioritize future mitigation projects; and
3. Assist in meeting the requirements of federal assistance programs

The Mitigation Plan is integrated with other City plans including the City of Signal Hill Emergency Operations Plan, General Plan as well as department-specific standard operating procedures.

#### Mitigation Measure Categories

Following is FEMA's list of mitigation categories. The activities identified by the Planning Team are consistent with the six broad categories of mitigation actions outlined in FEMA publication 386-3 *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies*.

- ✓ **Prevention:** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.
- ✓ **Property Protection:** Actions that involve modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- ✓ **Public Education and Awareness:** Actions to inform and educate citizens, property owners, and elected officials about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- ✓ **Natural Resource Protection:** Actions that, in addition to minimizing hazard losses preserve or restore the functions of natural systems. Examples include sediment and



erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

- ✓ **Emergency Services:** Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.
- ✓ **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, retaining walls, and safe rooms.

#### Q&A | ELEMENT C. MITIGATION STRATEGY | C3

**Q:** C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))

**A:** See **Goals** below.

## Goals

The Planning Team developed mitigation goals to avoid or reduce long-term vulnerabilities to hazards. These general principles clarify desired outcomes.

The goals are based on the risk assessment and Planning Team input, and represents a long-term vision for hazard reduction or enhanced mitigation capabilities. They are compatible with community needs and goals expressed in other planning documents prepared by the City.

Each goal is supported by mitigation action items. The Planning Team developed these action items through its knowledge of the local area, risk assessment, review of past efforts, identification of mitigation activities, and qualitative analysis.

The five mitigation goals and descriptions are listed below.

### *Protect Life and Property*

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural, human-caused, and technological hazards.

Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, human-caused, and technological hazards.

FEMA defines **Goals** as general guidelines that explain what you want to achieve. They are usually broad policy-type statements, long-term, and represent global visions.

FEMA defines **Mitigation Activities** as specific actions that help you achieve your goals and objectives.



## *Enhance Public Awareness*

Develop and implement education and outreach programs to increase public awareness of the risks associated with natural, human-caused, and technological hazards.

Provide information on tools; partnership opportunities, and funding resources to assist in implementing mitigation activities.

## *Preserve Natural Systems*

Support management and land use planning practices with hazard mitigation to protect life.

Preserve, rehabilitate, and enhance natural systems to serve hazard mitigation functions.

## *Encourage Partnerships and Implementation*

Strengthen communication and coordinate participation with public agencies, citizens, non-profit organizations, business, and industry to support implementation.

Encourage leadership within the City and public organizations to prioritize and implement local and regional hazard mitigation activities.

## *Strengthen Emergency Services*

Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.

Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.

Coordinate and integrate hazard mitigation activities where appropriate, with emergency operations plans and procedures.

The Planning Team also developed hazard-specific mitigation goals, which appear in the **Mitigation Strategies Section**.

## **How are the Mitigation Action Items Organized?**

The action items are a listing of activities in which City agencies and citizens can be engaged to reduce risk. Each action item includes an estimate of the timeline for implementation.

The action items are organized within the following **Mitigation Actions Matrix**, which lists all of the multi-hazard (actions that reduce risks for more than one specific hazard) and hazard-specific action items included in the mitigation plan. Data collection and research and the public participation process resulted in the development of these action items. The Matrix includes the following information for each action item:

## *Funding Source*

The action items can be funded through a variety of sources, possibly including: operating budget/general fund, development fees, Community Development Block Grant (CDBG), Hazard Mitigation Grant Program (HMGP), other Grants, private funding, Capital Improvement Plan, and other funding opportunities.



## *Coordinating Organization*

The Mitigation Actions Matrix assigns primary responsibility for each of the action items. The hierarchies of the assignments vary – some are positions, others departments, and other committees. The primary responsibility for implementing the action items falls to the entity shown as the “Coordinating Organization”. The coordinating organization is the agency with regulatory responsibility to address hazards, or that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation. Coordinating organizations may include local, County, or regional agencies that are capable of or responsible for implementing activities and programs.

## *Plan Goals Addressed*

The plan goals addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins.

The plan goals are organized into the following five areas:

- ✓ Protect Life and Property
- ✓ Enhance Public Awareness
- ✓ Preserve Natural Systems
- ✓ Encourage Partnerships and Implementation
- ✓ Strengthen Emergency Services

## Q&A | ELEMENT C. MITIGATION STRATEGY | C5

**Q:** C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv); (Requirement §201.6(c)(3)(iii))

**A:** See **Priority Ratings** below.

### *Benefit/Cost Ratings*

The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. A less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

**Cost ratings** were defined as follows:

**High:** Existing jurisdictional funding will not cover the cost of the action item so other sources of revenue would be required.

**Medium:** The action item could be funded through existing jurisdictional funding but would require budget modifications.

**Low:** The action item could be funded under existing jurisdictional funding.

**Benefit ratings** were defined as follows:

**High:** The action item will provide short-term and long-term impacts on the reduction of risk exposure to life and property.

**Medium:** The action item will have long-term impacts on the reduction of risk exposure to life and property.

**Low:** The action item will have only short-term impacts on the reduction of risk exposure to life and property.



## Priority Rating

Going beyond rating “benefit and cost”, the Planning Team adopted the following process for rating the “priority” of each mitigation action item. Designations of “High”, “Medium”, and “Low” priority have been assigned to each action item using the following criteria:

### Does the Action:

- solve the problem?
- address Vulnerability Assessment?
- reduce the exposure or vulnerability to the highest priority hazard?
- address multiple hazards?
- benefits equal or exceed costs?
- implement a goal, policy, or project identified in the General Plan or Capital Improvement Plan?

### Can the Action:

- be implemented with existing funds?
- be implemented by existing state or federal grant programs?
- be completed within the 5-year life cycle of the LHMP?
- be implemented with currently available technologies?

### Will the Action:

- be accepted by the community?
- be supported by community leaders?
- adversely impact segments of the population or neighborhoods?
- require a change in local ordinances or zoning laws?
- positive or neutral impact on the environment?
- comply with all local, state and federal environmental laws and regulations?

### Is there:

- sufficient staffing to undertake the project?
- existing authority to undertake the project?

As mitigation action items were updated or written the Planning Team, representatives were provided worksheets for each of their assigned action items. Answers to the criteria above determined the priority according to the following scale.

- 1-6 = Low priority
- 7-12 = Medium priority
- 13-18 = High priority



#### **Q&A | ELEMENT C. MITIGATION STRATEGY | C1**

**Q:** C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))

**A:** See **Mitigation Actions Matrix** below.

#### **Q&A | ELEMENT C. MITIGATION STRATEGY | C4**

**Q:** C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))

**A:** See **Mitigation Actions Matrix** below.

#### **Q&A | ELEMENT C. MITIGATION STRATEGY | C5**

**Q:** C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))

**A:** See **Mitigation Actions Matrix** below.

#### **Q&A | ELEMENT D. MITIGATION STRATEGY | D2**

**Q:** D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))

**A:** See **Mitigation Actions Matrix** below.

#### **Q&A | ELEMENT D. MITIGATION STRATEGY | D3**

**Q:** D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))

**A:** See **Mitigation Actions Matrix** below.



## Mitigation Actions Matrix

Following is **Table: Mitigation Actions Matrix** which identifies the existing and future mitigation activities developed by the Planning Team.

**Table: Mitigation Actions Matrix**

Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Multi-Hazard Mitigation Action Items											
			Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes	
MH-1 Integrate the goals and action items from the City of Signal Hill Hazard Mitigation Plan into existing regulatory documents and programs, where appropriate.	A, CD, PW	Ongoing	X	X	X	X	X	GF	GF	H	L	H	Revised. Note: updated Safety Element and Ordinances	
MH-2 Identify and pursue funding opportunities to develop and implement local mitigation activities.	A, CD, PW	Ongoing	X	X	X			GF	GF	H	L	H	Revised	
MH-3 Enhance and implement education programs aimed at	A, PD, CS, PW	Ongoing	X	X		X	X	GF	GR	H	L	H	Revised	



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools. Existing programs include CERT, Map Your Neighborhood, and American Red Cross 21 Weeks to Prepare.													
MH-4 Establish policy to ensure mitigation projects are in place to safeguard critical facilities (as identified in the General Plan Safety Element).	PW	1 year	X					GF	GF	H	L	H	Revised
MH-5 Adopt California Building Code.	CD	Ongoing	X					GF	GF	L	L	L	Revised. Note: Adopted every 3 years
MH-6 Develop seismic inventory of at-risk City-owned buildings and infrastructure and prioritize mitigation projects.	PW, CD	2 years	X				X	GR	GR	H	H	H	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety																																			
	Timeline			Goal: Protect Life and Property			Goal: Public Awareness			Goal: Natural Systems			Goal: Partnerships and Implementation			Goal: Emergency Services			Funding Source: GF- General Fund, GR-Grant			Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant			Benefit: L-Low, M-Medium, H-High			Cost: L-Low, M-Medium, H-High			Priority: L-Low, M-Medium, H-High			2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes		
MH-7 Improve communication between City and County road departments produce strategies to deal with transportation infrastructure..	PW	Ongoing	X							X	X																									
MH-8 Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.	PD, PW	Ongoing		X			X	X		GF		GR																								
MH-9 Compile a directory of out-of-area contractors to help with repairs/reconstruction so that restoration occurs in a timely manner.	F, PW	1 year							X																											
MH-10 Ensure public utilities serving buildings identified for use as shelters are retrofitted.	PW	5 years	X						X																											



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety											
	Timeline											
	PW	Ongoing	X		X	X	GF	GF	H	M	M	H
MH-11 Install and improve back-up power in city owned critical facilities as cited in the GP Safety Element.	PW	Ongoing	X		X	X	GF	GF	H	M	M	H
MH-12 Continue to encourage the development of mutual aid systems between Signal Hill and surrounding cities for emergency building assessment, CERT training, ect.	PW/PD	Ongoing	X		X	X	GF	GF	H	M	M	H
MH-13 Promote public education and outreach to increase awareness of hazards and opportunities for mitigation. Continue to stock brochures from American Red Cross, FEMA, and Cal OES about preparedness and home mitigation.	PD	Ongoing	X	X			GF	GF	H	M	M	H



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety														
		Timeline													
MH-14 Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.	PD	1 year	X	X	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High			
MH-15 Distribute information about evacuation route maps.	F CD	1 year	X	X						GF	GF	H	M	M	Merged with MH-13
MH-16 Post the Hazard Mitigation Plan on the City's website.	A	Ongoing		X						GF	GF	H	M	M	Revised. Disaster Movement Routes part of updated General Plan Safety Element.
MH-17 Hold a town sponsored hazard mitigation seminar for the community residents.	PD, CS	1 year		X		X									Deleted
MH-18 Develop City Talk Show about pre-disaster information.	A, PD	1 year		X											Deleted
2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes															



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety													
	Timeline													
MH-19 Maintain primary and alternate Emergency Operations Centers.	PD	Ongoing	X	X				X	GF	GF	H	M	M	Revised. Primary EOC located in the new Police HQ, alternate EOC located at PW Yard.
MH-20 Continue to provide informational literature on animal disaster plans and supply kits.	CS	Ongoing	X	X				GF	GF	H	M	M	Revised. Note: Brochures distributed at City Hall.	
MH-21 Encourage the American Red Cross to hold a variety of courses, including: CPR, Basic First Aid, Introduction to Disaster Services, Mass Care, Shelter Operations, babysitting, Healthcare Provider, pet first-aid and others at the Red Cross Office and at other locations throughout the City.	CS	Ongoing	X	X		X	X	GF	GF	M	L	L	Revised	
2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes														



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
MH-22 Advertise the availability of emergency management materials on the City's website.	A	1.5 years	X	X									Deleted - redundant
MH-23 Educate the public on existing self-help agencies available within the greater community.	A	2 years		X									Deleted - redundant
MH-24 Partner with other agencies such as Hospitals, County departments, neighboring cities, etc. to include the Website address as a link on their websites.	A, CS	1.5 years		X									Deleted - redundant
MH-25 The State and County Office of Emergency Services websites have information about disaster preparedness and related links. Expand and update links to those websites as needed and as appropriate.	A	1.5 years	X	X	X	X	X						Deleted - redundant



Mitigation Action Item														
MH-26 Maintain resource center at City Hall. Display rack should include the Emergency Preparedness Guidebook, FEMA's Are You Ready, the Special Needs Survey, brochures on disaster supplies kits and plans, etc.	§§	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline											
MH-27 Involve Hazard Mitigation Planning Team in review of future updates of the City General Plan or Zoning Ordinance to ensure consideration of threats posed by hazards.	CD	Ongoing	X	X	X	X								
MH-28 Identify and prioritize needs for additional shelter supplies for City employees to include but not limited to additional cots, blankets and shelter kits.	CS	Ongoing	X				X	GF	GF	M	L	M	M	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety												
	Timeline												
	PD	Ongoing	X	X	X	X	X	GR	GR	H	H	H	Revised. Note: City on 7 <sup>th</sup> class.
MH-29 Teach CERT classes to interested citizens in the City and CITY employees to assist their neighbors during emergencies. This course will be taught utilizing City staff and resources independent of Los Angeles Co. Fire. Promote CERT through the Chamber of Commerce to gain business participation.	PD	Ongoing	X	X	X	X	X	GR	GR	H	H	H	Revised. Note: City on 7 <sup>th</sup> class.
MH-30 Train, law enforcement, public works, CERT members and other support personnel in the Incident Command System.	PD	Ongoing	X	X	X	X	X	GF	GF	M	H	M	Revised
<del>MH-31 Promote CERT through the Chamber of Commerce to gain business participation.</del>	<del>PD</del>	<del>1 year</del>	<del>X</del>	<del>X</del>									Merged with MH-29
MH-32 Provide copies of the Hazard Mitigation Plan to the	A	Completed	X		X			n/a	n/a	n/a	n/a	n/a	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
Community Development Department for their information during new development considerations.													
MH-33 The Community Development Department will review the General Plan to ensure that designated growth areas are not in high hazard areas identified in this plan.	CD	Completed	X	X			n/a	n/a	n/a	n/a	n/a	n/a	Revised
MH-34 Review and update all annexes of the City's Emergency Operations Plan. Include participation from all departments and outside providers of emergency services in the update process.	PD	Completed 2016	X	X	X	X	n/a	n/a	n/a	n/a	n/a	n/a	Revised
MH-35 Build a new E911 Communications Center or ECC in	PD	Completed 2013				X	n/a	n/a	n/a	n/a	n/a	n/a	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
conjunction with the construction of a new VHF-trunked radio system. The new system will feature a combined ECC dispatch facility with a ten (10) workstation design to serve all public safety and local government agencies. The center's operation will be CAD based with Enhanced 9-1-1 interface that includes hard wire and wireless call number and location identification using a GIS/GPS digital mapping component. An optional feature for mobile units will include mobile data transmission capability using mobile mounted laptops to provide rapid access to information critical to most emergency response incidents.													



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety																																			
	Timeline			Goal: Protect Life and Property			Goal: Public Awareness			Goal: Natural Systems			Goal: Partnerships and Implementation			Goal: Emergency Services			Funding Source: GF- General Fund, GR-Grant			Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant			Benefit: L-Low, M-Medium, H-High			Cost: L-Low, M-Medium, H-High			Priority: L-Low, M-Medium, H-High			2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes		
	PD	3 years	X							X					X																					
MH-36 Ensure that when ECC/911 system upgrade is completed, there is a capability to communicate with all EOC agencies with redundant backups in voice and data communications.	PD	Completed	X							X	n/a	n/a	n/a	n/a																Revised						
MH-37 Establish an offsite Emergency Communications Center (ECC), alternate Emergency Operations Center (EOC) at Public Works, and purchase and equip Mobile Command Center. In the event the primary sites must be vacated, the off-site back-up centers can be rapidly mobilized in a secured facility. Both centers will duplicate the primary points of operation.	PD																														Revised					



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety											
	Timeline											
	Goal: Protect Life and Property											
	Goal: Public Awareness											
	Goal: Natural Systems											
	Goal: Partnerships and Implementation											
	Goal: Emergency Services											
	Funding Source: GF- General Fund, GR-Grant											
MH-38 Work with Volunteer Organizations Active in Disasters (VOAD), American Red Cross, and Salvation Army to ensure representation on the EOP Committee.	PD	Completed	X	X	X	X	n/a	n/a	n/a	n/a	n/a	Revised
MH-39 Conduct joint exercise with school district and other special districts located within the City boundaries.	PD	Completed	X	X	X	X	n/a	n/a	n/a	n/a	n/a	Revised. Note: Exercise was with National Guard
MH-40 Ensure that the actions and findings of the LEPC are incorporated into the City EOP and Mitigation Plan updates and revisions.	A	Completed			X	X	n/a	n/a	n/a	n/a	n/a	Revised
MH-41 Ensure training and exercise standards are maintained (as established in the Standardized Emergency Management System).	PD	Completed	X	X	X	X	n/a	n/a	n/a	n/a	n/a	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
MH-42 Identify potential funding sources outside of City Government to continue a program of building and maintaining community partnerships, planning, public awareness and education and disaster mitigation and preparedness.	A,F	1 year	X	X	X	X	X	GF	GF	M	M	M	Deleted
MH-43 Amend job description of Emergency Operations Coordinator to include leading the City's Hazard Mitigation Advisory Committee in developing a sustainable process for implementing, monitoring, and evaluating the mitigation activities.		Ongoing	X	X	X	X	X	GF	GF	M	M	M	Revised
MH-44 Repeat the "Levels of Concern" survey in five years to monitor successes and failures of	A	5 years	X	X	X	X	X						Deleted



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
natural hazard mitigation programs.	CS	Done	X	X									Deleted
MH-45 Develop and complete a baseline survey to gather perceptions of private citizens and the business community regarding natural hazard risks and identify mitigation needs.	PD	Ongoing	X	X	X	X	X						Deleted - redundant
MH-46 Work with Community Planning Organizations (CPOs) and other neighborhood groups to establish a Community Emergency Response Team (CERT).	F, PD	Ongoing	X	X	X	X	GF	GF	H	L	H		Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	X	X	X	X	X	GF	GF	H	L	M	Revised
MH-48 Identify opportunities for partnering with citizens, private contractors, and other jurisdictions to increase availability of equipment and manpower for efficiency of response efforts.	A	Ongoing	X	X	X	X	X	GF	GF	H	L	M	Revised
MH-49 Develop hazard GIS database of all repetitive loss properties in the City to be used in future mitigation activities.	A, PW	5 years	X	X	X	X	X						Deleted – no repetitive loss properties
MH-50 Continue working with the State of California to get updated repetitive loss information on properties in the City, in order to plan future mitigation activities.	PW, CD	1 year	X	X	X	X	X						Deleted – no repetitive loss properties
MH-51 Enhance weather monitoring to attain earlier severe storm warnings.	PW	Ongoing	X	X	X	X	X	GF	GF	H	L	M	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	X	X	X	X	X	GF	GF	H	H	H	Revised
MH-52 Routine maintenance of the community's infrastructure will be done to minimize the potential for system failure because of or during a disaster.	PW	Ongoing	X	X	X	X	X	GF	GF	H	H	H	Revised
MH-53 Enhance response capability of county fire, city police, and emergency medical services personnel.	PD	6 months	X	X	X	X	X			L-Low	M-Medium	H-High	Deleted – not mitigation
MH-54 Assess availability of backup power resources (e.g. generators, solar, etc.) of medical facility, nursing homes, and fire, police, rescue, and emergency management personnel; upgrade resources as necessary.	PD	Ongoing	X	X	X	X	X	GR	GR	H	H	H	Revised
MH-55 Develop mitigation strategies to protect identified at-risk historic properties.	CD	1 year	X	X	X	X	X						Deleted



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety												
	Timeline												
MH-56 Implement the National Incident Management System (NIMS) in each City department.	PD	Completed	X	X	X	X	X	n/a	n/a	n/a	n/a	Revised	
MH-57 Conduct a full review of the Hazard Mitigation Action Plan every 5 years by evaluating mitigation successes, failures, and areas that were not previously addressed.	A	5 years	X	X	X	X	X					Deleted – already mandated in regulations	
MH-58 Determine what kinds of minor repairs and temporary protection activities (e.g., temporary roofing, protect against loss of life/injury, shoring, protect contents) can be done in the immediate aftermath of a disaster.	CD	1 year	X				X					Deleted	
MH-59 Develop comprehensive all hazards debris management plan.	PW	2 years	X	X	X	X	X	GR	GR	H	H	H	Revised. Note: City prepared a debris management strategy



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
MH-60 Coordinate the maintenance of emergency transportation routes through communication among the county roads department, neighboring jurisdictions, and CalTrans.	PW	2 years	X	X	X	X	X						for use in El Nino events.
MH-61 Encourage interested individuals to participate in hazard mitigation planning and training activities.	PD, CS	1 year	X	X	X	X	X						Deleted – already addressed in the Safety Element's Disaster Movement Routes.
MH-62 Monitor and publicize the effectiveness of mitigation initiatives implemented in the community.	A	1 year	X	X	X	X	X						Deleted
MH-63 Educate the public about procedures for reporting human-caused incidents.	PD	18 months	X	X	X	X	X						Deleted



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety											
	Timeline											
MH-64 Educate the public about emergency sheltering and evacuation procedures.	PD	1 year	X	X	X	X	X	X	H	L	H	Deleted - redundant
MH-65 Educate the public about hazards prevalent to their area utilizing Map Your Neighborhood.	PD, A	Ongoing		X	X	X	X	GF	GF	L	H	Revised
MH-66 Purchased and trained EOC staff on Veoci – an emergency management software program.	PD	Completed	X		X	X	X	n/a	n/a	n/a	n/a	New
MH-67 Establish agreements with vendors for use of services, equipment, and/or facilities following a disaster.	F, PD	1 year	X	X	X	X	X	GF	GF	H	L	M
												New. Note: Already established Memorandum of Understanding with trash hauler EDCO for City to have access to trucks and other equipment following a disaster.



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety												
	Timeline												
MH-68 Identify funding sources for structural and non-structural retrofitting of City-owned structures that are identified as vulnerable to seismic, flooding, and other hazards.	PW	1 year	X	X	X	X	X	GR	GR	H	H	H	New. Moved and revised from Earthquake action items.
MH-69 Encourage purchase of hazard insurances including earthquake and flood.	A	1 year		X		X		GF	GF	L	M		Revised
MH-70 Secure grant funding to conduct traffic study and engineering report on impact of hazardous material related heavy equipment movement on city street infrastructure.	CD/PW	3 years	X		X		X	GR	GR	H	M	H	New
MH-71 Secure grant funding for city based CERT training program and ongoing equipment procurement.	PD	3 years	X	X		X	X	GR	GR	H	H	H	New



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Partnerships and Implementation	Goal: Emergency Services	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
<b>Earthquake Mitigation Action Items</b>													
EQ-1 Incorporate the Regional Earthquake Transportation Evacuation Routes developed by the Regional Emergency Managers Group into appropriate planning documents.	PW	5 years	X	X	X	X	X						Deleted – already addressed in updated Safety Element.
EQ-2 Identify funding sources for structural and nonstructural retrofitting of structures that are identified as seismically vulnerable.	CD, A	1 year	X	X	X	X	X						Deleted – moved to Multi-Hazard action items.
EQ-3 Encourage seismic strength evaluations of critical facilities in the City to identify vulnerabilities for mitigation of schools and university, public infrastructure, and critical facilities to meet current seismic standards.	CD, PW	1 year	X	X	X	X	X						Deleted – no authority over non-City-owned properties.



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety																																			
	Timeline			Goal: Protect Life and Property			Goal: Public Awareness			Goal: Natural Systems			Goal: Partnerships and Implementation			Goal: Emergency Services			Funding Source: GF- General Fund, GR-Grant			Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant			Benefit: L-Low, M-Medium, H-High			Cost: L-Low, M-Medium, H-High			Priority: L-Low, M-Medium, H-High			2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes		
	CD	PW	A	Ongoing	1 year	X	X	X	X	X	X	GF	GF	GF	GF	GR	GR	H	H	H	H	M	Revised	Deleted - redundant	Deleted – Revised action item and moved to Multi-Hazard	Revised. Note: City stays updated with each seismic study submitted on development projects as well as updates from the State of California. Also,										
EQ-4 Encourage reduction of non-structural and structural earthquake hazards in homes, schools, and businesses.	CD	PW	A	Ongoing	1 year	X	X	X	X	X	X	GF	GF	GF	GF	GR	GR	H	H	H	H	M	Revised	Deleted - redundant	Deleted – Revised action item and moved to Multi-Hazard	Revised. Note: City stays updated with each seismic study submitted on development projects as well as updates from the State of California. Also,										
EQ-5 Minimize earthquake damage risk by retrofitting critical facilities.																																				
EQ-6 Encourage purchase of earthquake hazard insurance.																																				
EQ-7 As updates become available, integrate new earthquake hazard mapping data for the City and improve technical analysis of earthquake hazards.	CD			Ongoing		X		X	X			GR	GR																							



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	X	X	X	X	X	GR	GR	H	H	H	New
EQ-8 Secure grant funding for updated Technical Background Report associated with the General Plan Safety Element.	CD	5 years	X	X	X		X						General Plan Safety Element is being updated.
<b>Landslide Mitigation Action Items</b>													
LS-1 Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas.	BS	Ongoing	X	X	X	X	X	GF	GF	H	H	H	Revised
LS-2 Encourage construction and subdivision design that can be applied to steep slopes to reduce the potential adverse impacts from development	BS	Ongoing	X					GF	GF	M	M	M	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline	X	X	X	X	X	X	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR-Grant	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
LS-3 Identify safe evacuation routes in high-risk debris flow and landslide areas.	CD	6 months	X		X	X	X	X						Deleted
LS-4 Investigate landslide warning systems to ensure effectiveness and efficiency and increase coordination between local jurisdictions and the state for landslide warning systems.	CD	6 months	X	X	X	X	X	X						Deleted
LS-5 Limit activities in identified potential and historical landslide areas through regulation and public outreach.	CD	Ongoing	X	X	X	X	X	X	GF	GF	H	L	M	Revised



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety												
	Timeline												
			X	X	X	X	X	GF	GF	M	M	M	Revised
WS-2 Monitor trees and branches in public areas at risk of breaking or falling in wind and sand storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.	PW	Annual	X	X	X	X	X	GF	GF	M	M	M	Revised
Drought Mitigation Action Items													
DR-1 Distribute information to all property owners and renters on the importance of water conservation and different venues of purchasing water saving mechanisms for homes and businesses.	PW	Ongoing		X	X			GF	GF	H	L	M	Revised
DR-2 Develop public education program on water conservation	PW	1-year	X	X	X	X	X						Deleted



Mitigation Action Item	Coordinating Agency A-Administration, CD-Community Development, CS-Community Services, PW-Public Works, F-Finance, BS-Building Safety	Timeline												
techniques for homes and businesses.														
DR-3 Investigate possibility of extending (deepening) existing water wells.	PW	Completed	X			X	X	n/a	n/a	n/a	n/a	n/a	n/a	Revised. Note: Well was dug in 2008 and expected to be operational in 2016.
DR-4 Identify water resources management and conservation opportunities.	PW	Ongoing	X	X	X	X	X	GF	GF	H	L	H		Revised
DR-5 Implement use of recycled water to supplement imported/local water sources.	PW	Ongoing	X	X	X	X	X	GF	GF	H	M	H		Revised. Note: Already completed first phase of reclaimed water system.
DR-6 Practice water conservation by building demonstration gardens and retrofit public parks.	PW	Ongoing	X	X	X	X	X	GF	GF	H	M	H		New
DR-7 Write 20X2020 Water Conservation Plan.	PW	1 year	X	X	X	X	X	GF	GF	H	M	H		New
2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes														

# Plan Maintenance

The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section describes how the City will integrate public participation throughout the plan maintenance process.

## Q&A | ELEMENT A: PLANNING PROCESS | A6

**Q:** A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

**A:** See **Method and Scheduling of Plan Implementation** below.

## Method and Scheduling of Plan Implementation

The Planning Team that was involved in research and writing of the Plan will also be responsible for implementation. The Planning Team will be led by the Chair of the Planning Team and will be referred to as the Local Mitigation Officer.

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Monitoring</b>	X	X	X	X	X
<b>Evaluating</b>					X
Internal Planning Team Evaluation	X	X	X	X	X
Cal OES and FEMA Evaluation					X
<b>Updating</b>					X

## Monitoring and Implementing the Plan

### Plan Adoption

Adoption of the Mitigation Plan by the City's governing body is one of the prime requirements for approval of the plan. Once the plan is completed, the City Council will be responsible for adopting the Mitigation Plan. The governing body has the responsibility and authority to promote sound public policy regarding hazards. The local agency governing body will have the authority to periodically update the plan as it is revised to meet changes in the hazard risks and exposures in the City. The approved Mitigation Plan will be significant in the future growth and development of the City.

The City Council will be responsible for adopting the Mitigation Plan. This governing body has the authority to promote sound public policy regarding hazards. Once the plan has been adopted, the Local Mitigation Officer will be responsible for submitting it to the State Hazard Mitigation Officer at California Emergency Management Agency (Cal OES). Cal OES will then submit the plan to the Federal Emergency Management Agency (FEMA) for review and approval. This review will address the requirements set forth in 44 C.F.R. Section 201.6 (Local Mitigation Plans). Upon acceptance by FEMA, City of Signal Hill will gain eligibility for Hazard Mitigation Grant Program funds.



## *Local Mitigation Officer*

Under the direction of the Local Mitigation Officer, the Planning Team will take responsibility for plan maintenance and implementation. The Local Mitigation Officer will facilitate the Planning Team meetings and will assign tasks such as updating and presenting the Plan to the members of the Planning Team. Plan implementation and evaluation will be a shared responsibility among all of the Planning Team members. The Local Mitigation Officer will coordinate with City leadership to ensure funding for 5-year updates to Plan as required by FEMA.

The Planning Team will be responsible for coordinating implementation of plan action items and undertaking the formal review process. The Local Mitigation Officer will be authorized to make changes in assignments to the current Planning Team.

The Planning Team will meet no less than quarterly. Meeting dates will be scheduled once the final Planning Team has been established. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan.

### **Q&A | ELEMENT C. MITIGATION STRATEGY | C6**

**Q:** C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))

**A:** See **Implementation through Existing Program** below.

### *Implementation through Existing Programs*

The City of Signal Hill addresses statewide planning goals and legislative requirements through its General Plan, its Capital Improvement Plan, and California Building and Safety Codes. The Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The City of Signal Hill will implement recommended mitigation action items through existing programs and procedures.

The City of Signal Hill Building Safety Department is responsible for adhering to the State of California's Building and Safety Codes. In addition, the Planning Team will work with other agencies at the state level to review, develop and ensure Building and Safety Codes are adequate to mitigate or prevent damage by hazards. This is to ensure that life-safety criteria are met for new construction.

Some of the goals and action items in the Mitigation Plan will be achieved through activities recommended in the CIP. Various City departments develop the CIP and review it on an annual basis. Upon annual review of the CIP, the Planning Team will work with the City departments to identify areas that the Mitigation Plan action items are consistent with CIP goals and integrate them where appropriate.

Upon FEMA approval, the Planning Team will begin the process of incorporating existing planning mechanisms at the City level. The meetings of the Planning Team will provide an opportunity for Planning Team members to report back on the progress made on the integration of mitigation planning elements into City planning documents and procedures.



## Economic Analysis of Mitigation Projects

FEMA's approach to identify the costs and benefits associated with hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis.

Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later.

Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating hazards can provide decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

Given federal funding, the Planning Team will use a FEMA-approved benefit/cost analysis approach to identify and prioritize mitigation action items. For other projects and funding sources, the Planning Team will use other approaches to understand the costs and benefits of each action item and develop a prioritized list.

The “benefit” and “cost” of each mitigation action item was included in the Mitigation Actions Matrix located in Part III: Mitigation Strategies. A more technical assessment will be required in the event grant funding is pursued through the Hazard Mitigation Grant Program. FEMA Benefit-Cost Analysis Guidelines are discussed below.

### FEMA Benefit-Cost Analysis Guidelines

The Stafford Act authorizes the President to establish a program to provide technical and financial assistance to state and local governments to assist in the implementation of hazard mitigation measures that are cost effective and designed to substantially reduce injuries, loss of life, hardship, or the risk of future damage and destruction of property. To evaluate proposed hazard mitigation projects prior to funding FEMA requires a Benefit-Cost Analysis (BCA) to validate cost effectiveness. BCA is the method by which the future benefits of a mitigation project are estimated and compared to its cost. The end result is a benefit-cost ratio (BCR), which is derived from a project’s total net benefits divided by its total project cost. The BCR is a numerical expression of the cost effectiveness of a project. A project is considered to be cost effective when the BCR is 1.0 or greater, indicating the benefits of a prospective hazard mitigation project are sufficient to justify the costs.

Although the preparation of a BCA is a technical process, FEMA has developed software, written materials, and training to support the effort and assist with estimating the expected future benefits over the useful life of a retrofit project. It is imperative to conduct a BCA early in the project development process to ensure the likelihood of meeting the cost-effective eligibility requirement in the Stafford Act.

The BCA program consists of guidelines, methodologies and software modules for a range of major natural hazards including:

- ✓ Flood (Riverine, Coastal Zone A, Coastal Zone V)
- ✓ Hurricane Wind
- ✓ Hurricane Safe Room



June 2010  
Version 1.5

- ✓ Damage-Frequency Assessment
- ✓ Tornado Safe Room
- ✓ Earthquake
- ✓ Wildfire

The BCA program provides up to date program data, up to date default and standard values, user manuals and training. Overall, the program makes it easier for users and evaluators to conduct and review BCAs and to address multiple buildings and hazards in a single BCA module run.

#### **Q&A | ELEMENT A: PLANNING PROCESS | A6**

**Q:** A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

**A:** See **Evaluating and Updating the Plan** below.

## **Evaluating and Updating the Plan**

### *Formal Review Process*

The Mitigation Plan will be evaluated on an annual basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The evaluation process includes a firm schedule and timeline, and identifies the agencies and organizations participating in plan evaluation. The Local Mitigation Officer or designee will be responsible for contacting the Planning Team members and organizing the annual meeting. Planning Team members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan.

The Planning Team will review the goals and action items to determine their relevance to changing situations in the City, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The Planning Team will also review the **Risk Assessment** portion of the Plan to determine if this information should be updated or modified, given any new available data. The coordinating organizations responsible for the various action items will report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised.

The Local Mitigation Officer will assign the duty of updating the Plan to one or more of the Planning Team members. The designated Planning Team members will have three months to make appropriate changes to the Plan before submitting it to the Planning Team members. The Planning Team will also notify all holders of the City plan when changes have been made. Every five years the updated plan will be submitted to the State Hazard Mitigation Officer at the California Office of Emergency Services and the Federal Emergency Management Agency for review.

At each of the quarterly Planning Team meetings, the Local Mitigation Officer will facilitate a discussion on each section of the FEMA-approved Plan:

**Planning Process** – Update as necessary, including regulatory changes.



**Risk Assessment** - Determine if this information should be updated or modified, given any new available data.

**Mitigation Strategies** - Review the goals and action items to determine their relevance to changing situations in the City, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. Most importantly, is the thorough review of the Mitigation Action Matrix. The coordinating organizations responsible for the various action items will report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised.

Item Identifier	Action Item and Ideas for Implementation	Coordinating Agency	Timeline	Plan Goals Addressed	Protect Life and Property	Public Awareness	Natural Systems	Emergency Services	Partnerships and Implementation	Funding Source: GF- General Fund, GR-Grant	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, GR- Grant	Benefit: (Low   Medium   High)	Cost: (Low   Medium   High)	Priority: (Low   Medium   High)	2016 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes
<b>MULTI-HAZARD ACTION ITEMS</b>															
<b>EARTHQUAKE ACTION ITEMS</b>															

The Local Mitigation Officer will assign the duty of updating the Plan to one or more of the Planning Team members. The designated Planning Team members will have three months to make appropriate changes to the Plan before submitting it to the Planning Team members. The Planning Team will also notify all holders of the City plan when changes have been made. Every five years the updated plan will be submitted to the State Hazard Mitigation Officer at the California Office of Emergency Services and the Federal Emergency Management Agency for review and approval.



## Q&A | ELEMENT A: PLANNING PROCESS | A5

**Q:** A5. Is there discussion of how the community will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))

**A:** See **Continued Public Involvement** below.

### *Continued Public Involvement*

The City of Signal Hill is dedicated to involving the public directly in the continual review and updates to the Mitigation Plan. Copies of the plan will be catalogued and made available at City Hall and at all City operated public libraries. The existence and location of these copies will be publicized in City newsletters and on the City website. This site will also contain an email address and phone number where people can direct their comments and concerns. A public meeting will also be held after each evaluation or when deemed necessary by the Planning Team. The meetings will provide the public a forum in which they can express their concerns, opinions, or ideas about the Plan.

The Local Mitigation Officer will be responsible for using City resources to publicize the annual public meetings and maintain public involvement through the public access channel, web page, and newspapers.

## PART IV: APPENDIX

### General Hazard Overviews

#### Earthquake Hazards

##### Measuring and Describing Earthquakes

An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate, causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can further amplify ground motions. The severity of these effects is dependent on the amount of energy released from the fault or epicenter. One way to express an earthquake's severity is to compare its acceleration to the normal acceleration due to gravity. The acceleration due to gravity is often called "g". A ground motion with a peak ground acceleration of 100%g is very severe.

Peak Ground Acceleration (PGA) is a measure of the strength of ground motion. PGA is used to project the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (10%, 5%, or 2%) of being exceeded in 50 years. These ground motion values are used for reference in construction design for earthquake resistance. The ground motion values can also be used to assess relative hazard between sites, when making economic and safety decisions.

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**When a fault ruptures,  
seismic waves radiate,  
causing the ground to  
vibrate. The severity of the  
vibration increases with  
the amount of energy  
released and decreases  
with distance from the  
causative fault or  
epicenter.**

---

Another tool used to describe earthquake intensity is the Magnitude Scale. The Magnitude Scale is sometimes referred to as the Richter Scale. The two are similar but not exactly the same. The Magnitude Scale was devised as a means of rating earthquake strength and is an indirect measure of seismic energy released. The Scale is logarithmic with each one-point increase corresponding to a 10-fold increase in the amplitude of the seismic shock waves generated by the earthquake. In terms of actual energy released, however, each one-point increase on the Richter scale corresponds to about a 32-fold increase in energy released. Therefore, a Magnitude 7 (M7)

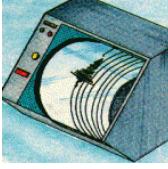
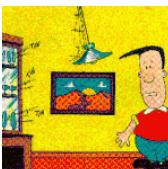
earthquake is 100 times ( $10 \times 10$ ) more powerful than a M5 earthquake and releases 1,024 times ( $32 \times 32$ ) the energy.

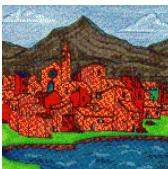
An earthquake generates different types of seismic shock waves that travel outward from the focus or point of rupture on a fault. Seismic waves that travel through the earth's crust are called body waves and are divided into primary (P) and secondary (S) waves. Because P waves move faster (1.7 times) than S waves, they arrive at the seismograph first. By measuring the time delay between arrival of the P and S waves and knowing the distance to the epicenter, seismologists can compute the magnitude for the earthquake.

The duration of an earthquake is related to its magnitude but not in a perfectly strict sense. There are two ways to think about the duration of an earthquake. The first is the length of time it takes for the fault to rupture and the second is the length of time shaking is felt at any given point (e.g. when someone says "I felt it shake for 10 seconds" they are making a statement about the duration of shaking). (Source: [www.usgs.gov](http://www.usgs.gov))

The Modified Mercalli Scale (MMI) is another means for rating earthquakes, but one that attempts to quantify intensity of ground shaking. Intensity under this scale is a function of distance from the epicenter (the closer to the epicenter the greater the intensity), ground acceleration, duration of ground shaking, and degree of structural damage. The Modified Mercalli Intensity Scale below rates the level of severity of an earthquake by the amount of damage and perceived shaking.

**Table: Modified Mercalli Intensity Scale**

	MMI Value	Description of Shaking Severity	Summary Damage Description Used on 1995 Maps	Full Description
	I			Not Felt
	II			Felt by persons at rest, on upper floors, or favorably placed.
	III			Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
	IV			Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motorcars rock. Windows, dishes, doors rattle. In the upper range of IV, wooden walls and frame creak.
	V	Light	Pictures Move	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clock stop, start, change rate.

	MMI Value	Description of Shaking Severity	Summary Damage Description Used on 1995 Maps	Full Description
	VI	Moderate	Objects Fall	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked.
	VII	Strong	Nonstructural Damage	Difficult to stand. Noticed by drivers of motorcars. Hanging objects quiver. Furniture broken. Damage to masonry, including cracks. Weak chimneys broken at roofline. Fall of plaster, loose bricks, stones, tiles, cornices. Some cracks in masonry C. Small slides and caving in along sand or gravel banks. Concrete irrigation ditches damaged.
	VIII	Very Strong	Moderate Damage	Steering of motorcars affected. Damage to masonry C, partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, and elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Cracks in wet ground and on steep slopes.
	IX	Violent	Heavy damage	General panic. Damage to masonry buildings ranges from collapse to serious damage unless modern design. Wood-frame structures rack, and, if not bolted, shifted off foundations. Underground pipes broken.
	X	Very Violent	Extreme Damage	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land.
	XI			Rails bent greatly. Underground pipelines completely out of service.

	MMI Value	Description of Shaking Severity	Summary Damage Description Used on 1995 Maps	Full Description
	XII			Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into air.

## Earthquake Related Hazards

Ground shaking, landslides, liquefaction, and amplification are the specific hazards associated with earthquakes. The severity of these hazards depends on several factors, including soil and slope conditions, proximity to the fault, earthquake magnitude, and the type of earthquake.

### *Ground Shaking*

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soils will typically see more damage than buildings on consolidated soils and bedrock.

Seismic activity along nearby or more distant fault zones are likely to cause ground shaking within the City limits.

### *Earthquake-Induced Landslide Potential*

Generally, these types of failures consist of rock falls, disrupted soil slides, rock slides, soil lateral spreads, soil slumps, soil block slides, and soil avalanches. Areas having the potential for earthquake-induced landslides generally occur in areas of previous landslide movement, or where local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements.

### *Liquefaction*

Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these structures. Liquefaction generally occurs during significant earthquake activity, and structures located on soils such as silt or sand may experience significant damage during an earthquake due to the instability of structural foundations and the moving earth. Many communities in Southern California are built on ancient river bottoms and have sandy soil. In some cases, the soil may be subject to liquefaction, depending on the depth of the water table.



## Landslide Hazards

### Hazard Characteristics

Landslides are a serious geologic hazard in almost every state in America. Nationally, landslides cause 25 to 50 deaths each year. The best estimate of direct and indirect costs of landslide damage in the United States range between \$1 and \$2 billion annually. As a seismically active region, California has a significant number of locations impacted by landslides. Some landslides result in private property damage; other landslides impact transportation corridors, fuel and energy conduits, and communication facilities. They can also pose a serious threat to human life.

Landslides can be broken down into two categories: 1) rapidly moving (generally known as debris flows), and; 2) slow moving. Rapidly moving landslides or debris flows present the greatest risk to human life, and people living in or traveling through areas prone to rapidly moving landslides, are at increased risk of serious injury. Slow moving landslides can cause significant property damage, but are less likely to result in serious human injuries.

The primary effects of mudslides/landslides include: abrupt depression and lateral displacement of hillside surfaces over distances of up to several hundreds of feet, disruption of surface drainage, blockage of flood control channels and roadways, displacement or destruction of improvements such as roadways, buildings, and water wells.

## Historic Southern California Landslides

### *1928 St. Francis Dam*

Cost, \$672.1 million (2000 Dollars) The dam, located in Los Angeles County, gave way on March 12, and its waters swept through the Santa Clara Valley toward the Pacific Ocean, about 54 miles away. Sixty-five miles of valley was devastated, and over 500 people were killed.

### *1956 Portuguese Bend*

Cost, \$14.6 million (2000 Dollars) California Highway 14, Palos Verdes Hills. Land use on the Palos Verdes Peninsula consists mostly of single-family homes built on large lots, many of which have panoramic ocean views. All of the houses were constructed with individual septic systems, generally consisting of septic tanks and seepage pits. Landslides have been active here for thousands of years, but recent landslide activity has been attributed in part to human activity. The Portuguese Bend Landslide began its modern movement in August 1956, when displacement was noticed at its northeast margin. Movement gradually extended downslope so that the entire eastern edge of the slide mass was moving within 6 weeks. By the summer of 1957, the entire slide mass was sliding towards the sea.

### *1958-1971 Pacific Palisades*

Cost, \$29.1 million (2000 Dollars) California Highway 1 and house damaged.

### *1961 Mulholland Cut*

Cost, \$41.5 million (2000 Dollars) On Interstate 405, 11 miles north of Santa Monica, Los Angeles County.



### *1963 Baldwin Hills Dam*

Cost, \$50 million (1963 Dollars) On December 14, the 650-foot-long by 155-foot-high earth fill dam gave way and sent 360 million gallons of water in a 50-foot-high wall cascading onto the community below, killing five persons.

### *1969 Glendora*

Cost, \$26.9 million (2000 Dollars) Los Angeles County, 175 houses damaged, mainly by debris flows.

### *1969 Seventh Ave., Los Angeles County*

Cost, \$14.6 million (2000 Dollars) California Highway 60.

### *1970 Princess Park*

Cost, \$29.1 million (2000 Dollars) California Highway 14, ten miles north of Newhall, near Saugus, northern Los Angeles County.

### *1971 Upper and Lower Van Norman Dams, San Fernando*

Cost, \$302.4 million (2000 Dollars) Earthquake-induced landslides. Damage due to the February 9, 1971, Magnitude 7.5 San Fernando, Earthquake.

The earthquake of February 9 severely damaged the Upper and Lower Van Norman Dams.

### *1971 Juvenile Hall, San Fernando*

Cost, \$266.6 million (2000 Dollars) Landslides caused by the February 9, 1971, San Fernando earthquake. In addition to damaging the San Fernando Juvenile Hall, this 1.2 km-long slide damaged trunk lines of the Southern Pacific Railroad, San Fernando Boulevard, Interstate Highway 5, the Sylmar electrical converter station, and several pipelines and canals.

### *1977-1980 Monterey Park, Repetto Hills, Los Angeles County*

Cost, \$14.6 million (2000 Dollars) 100 houses damaged in 1980 due to debris flows.

### *1978 Bluebird Canyon Orange County*

Cost, \$52.7 million (2000 Dollars) October 2, 60 houses destroyed or damaged. Unusually heavy rains in March of 1978 may have contributed to initiation of the landslide. Although the 1978 slide area was approximately 3.5 acres, it is suspected to be a portion of a larger, ancient landslide.

### *1979 Big Rock, California, Los Angeles County*

Cost, \$1.08 billion (2000 Dollars) California Highway 1 rockslide.

### *1980 Southern California Slides*

Cost, \$1.1 billion in damage (2000 Dollars) Heavy winter rainfall in 1979-90 caused damage in six Southern California counties. In 1980, the rainstorm started on February 8. A sequence of 5 days of continuous rain and 7 inches of precipitation had occurred by February 14. Slope failures were beginning to develop by February 15 and then very high-intensity rainfall occurred on

February 16. As much as eight inches of rain fell in a six-hour period in many locations. Records and personal observations in the field on February 16 and 17 showed that the mountains and slopes literally fell apart on those two days.

### *1983 San Clemente, Orange County*

Cost, \$65 million (2000 Dollars), California Highway 1. Litigation at that time involved approximately \$43.7 million (2000).



### *1983 Big Rock Mesa*

Cost, \$706 million (2000 Dollars) in legal claims condemnation of 13 houses, and 300 more threatened rockslide caused by rainfall.

### *1978-1980 San Diego County*

Experienced major damage from storms in 1978, 1979, and 1979-80, as did neighboring areas of Los Angeles and Orange County. One hundred and twenty landslides were reported to have occurred in San Diego County during these 2 years. Rainfall for the rainy seasons of 78-79 and 79-80 was 14.82 and 15.61 inches (37.6 and 39.6 cm) respectively, compared to a 125-year average (1850-1975) of 9.71 inches (24.7 cm). Significant landslides occurred in the Friars Formation, a unit that was noted as slide-prone in the Seismic Safety Study for the City of San Diego. Of the nine landslides that caused damage in excess of \$1 million, seven occurred in the Friars Formation, and two in the Santiago Formation in the northern part of San Diego County.

### *1994 Northridge Earthquake Landslides*

As a result of the Magnitude 6.7 Northridge Earthquake, more than 11,000 landslides occurred over an area of 10,000 km<sup>2</sup>. Most were in the Santa Susana Mountains and in mountains north of the Santa Clara River Valley. Destroyed dozens of homes, blocked roads, and damaged oil-field infrastructure. Caused deaths from Coccidioidomycosis (valley fever) the spore of which was released from the soil and blown toward the coastal populated areas. The spore was released from the soil by the landslide activity.



### *March 1995 Los Angeles and Ventura Counties*

Above normal rainfall triggered damaging debris flows, deep-seated landslides, and flooding. Several deep-seated landslides were triggered by the storms, the most notable was the La Conchita landslide, which in combination with a local debris flow, destroyed or badly damaged 11 to 12 homes in the small town of La Conchita, about 20 km west of Ventura. There also was widespread debris-flow and flood damage to homes, commercial buildings, and roads and highways in areas along the Malibu coast that had been devastated by wildfire two years before.

### *January 2005 Ventura County*



On January 10, 2005, a landslide once again struck the community of La Conchita, killing ten people and destroying or seriously damaging 36 houses.

## Landslide Characteristics

### *What is a landslide?*

"A landslide is defined as, the movement of a mass of rock, debris, or earth movement down a slope. Landslides are a type of "mass wasting" which denotes any down slope movement of soil and rock under the direct influence of gravity. The term "landslide" encompasses events such as rock falls, topples, slides, spreads, and flows."

Landslides are initiated by rainfall, earthquakes, volcanic activity, changes in groundwater, disturbance and change of a slope by human-caused construction activities, or any combination of these factors. Landslides also occur underwater, causing tidal waves and damage to coastal areas. These landslides are called submarine landslides."

The size of a landslide usually depends on the geology and the initial cause of the landslide. Landslides vary greatly in their volume of rock and soil, the length, width, and depth of the area affected, frequency of occurrence, and speed of movement. Some characteristics that determine the type of landslide are slope of the hillside, moisture content, and the nature of the underlying materials. Landslides are given different names, depending on the type of failure, and their composition and characteristics.

Slides move in contact with the underlying surface. These movements include rotational slides where sliding material moves along a curved surface and translational slides where movement occurs along a flat surface. These slides are generally slow moving and can be deep. Slumps are small rotational slides that are generally shallow. Slow-moving landslides occur on relatively gentle slopes and cause significant property damage, but are far less likely to result in serious injuries than rapidly moving landslides.

### *What is a Debris Flow?*

A debris or mud flow is a river of rock, earth and other materials, including vegetation that is saturated with water. This high percentage of water gives the debris flow a very rapid rate of movement down a slope. Debris flows move with speeds greater than 20 miles per hour, and often move much faster. This high rate of speed makes debris flows extremely dangerous to people and property in its path.



## *Areas Particularly Susceptible to Landslides*

Locations at risk from landslides or debris flows include areas with one or more of the following conditions:

- ✓ On or close to steep hills
- ✓ Steep road-cuts or excavations
- ✓ Existing landslides or places of known historic landslides (such sites often have tilted power lines, trees tilted in various directions, cracks in the ground, and irregular-surfaced ground)
- ✓ Steep areas where surface runoff is channeled, such as below culverts, V-shaped valleys, canyon bottoms, and steep stream channels
- ✓ Fan-shaped areas of sediment and boulder accumulation at the outlets of canyons
- ✓ Canyon areas below hillside and mountains that recently (within 1-6 years) were subjected to a wildland fire

## *Excavation and Grading*

Slope excavation is common in the development of home sites or roads on sloping terrain. Grading these slopes results in slopes that are steeper than the pre-existing natural slopes. Since slope steepness is a major factor in landslides, these steeper slopes are at an increased risk for landslides.

The added weight of fill placed on slopes also results in an increased landslide hazard. Small landslides are fairly common along roads, in either the road cut or the road fill. Landslides occurring below new construction sites are indicators of the potential impacts stemming from excavation.

## *Drainage and Groundwater Alterations*

Water flowing through or above ground, is often the trigger for landslides. Any activity that increases the amount of water flowing into landslide-prone slopes increases landslide hazards. Broken or leaking water or sewer lines can be especially problematic, as does water retention facilities that direct water onto slopes. However, even lawn irrigation in landslide prone locations results in damaging landslides. Ineffective storm water management and excess runoff also cause erosion, and increase the risk of landslide hazards. Drainage is affected, naturally by the geology and topography of an area. Development that results in an increase in impervious surface impairs the ability of the land to absorb water and redirects water to other areas. Channels, streams, ponding, and erosion on slopes indicate potential slope problems.

Road and driveway drains, gutters, downspouts, and other constructed drainage facilities concentrates and accelerates flow. Ground saturation and concentrated velocity flow are major causes of slope problems and triggers landslides.

## *Changes in Vegetation*

Removing vegetation from very steep slopes increases landslide hazards. Areas that experience wildfire and land clearing for development may have long periods of increased landslide hazard. Also, certain types of ground cover require constant watering to remain green. Changing away from native ground cover plants increases the risk of landslide.

## Windstorm Hazards

### Hazard Characteristics

Santa Ana wind conditions results in two general disaster conditions. The most common is fire fanned by the high winds. This was the situation in 1993 in Laguna Beach when a massive fire destroyed a number of homes in the surrounding hills. Wind driven flames again caused the destruction of more than 3,000 homes in Southern California in October, 2003. Other forms of disaster would be direct building damage, damage to utilities and infrastructure as a result of the high winds. This has occurred in the past few years in many southland communities including Los Angeles County.



Santa Ana winds commonly occur between October and February, with December having the highest frequency of events. Summer events are rare. Wind speeds are typically north to east at 35 knots through and below passes, and canyons with gusts to 50 knots. Stronger Santa Ana winds have gusts greater than 60 knots over widespread areas, and gusts greater than 100 knots in favored areas. Frequently, the strongest winds in the basin occur during the night and morning hours due to the absence of a sea breeze. The sea breeze which typically blows onshore daily, can moderate the Santa Ana winds during the late morning and afternoon hours. Santa Ana winds are an important forecast challenge because of the high fire danger associated with them. Also, unusually high surf conditions on the northeast side of the Channel Islands normally accompany a Santa Ana event.

The Beaufort Scale below, coined and developed by Sir Francis Beaufort in 1805, illustrates the effect that varying wind speed can have on sea swells and structures:

**Table: Beaufort Scale**  
**(Source : NOAA Storm Center)**

Beaufort Force	Speed (mph)	Wind Description - State of Sea - Effects on Land
0	Less 1	Calm - Mirror-like - Smoke rises vertically
1	1-3	Light - Air Ripples look like scales; No crests of foam - Smoke drift shows direction of wind, but wind vanes do not
2	4-7	Light Breeze - Small but pronounced wavelets; Crests do not break - Wind vanes move; Leaves rustle; You can feel wind on the face
3	8-12	Gentle Breeze - Large Wavelets; Crests break; Glassy foam; A few whitecaps - Leaves and small twigs move constantly; Small, light flags are extended
4	13-18	Moderate Breeze - Longer waves; Whitecaps - Wind lifts dust and loose paper; Small branches move
5	19-24	Fresh Breeze - Moderate, long waves; Many whitecaps; Some spray - Small trees with leaves begin to move



Beaufort Force	Speed (mph)	Wind Description - State of Sea - Effects on Land
6	25-31	Strong Breeze - Some large waves; Crests of white foam; Spray - Large branches move; Telegraph wires whistle; Hard to hold umbrellas
7	32-38	Near Gale - White foam from breaking waves blows in streaks with the wind - Whole trees move; Resistance felt walking into wind
8	39-46	Gale - Waves high and moderately long; Crests break into spin drift, blowing foam in well-marked streaks - Twigs and small branches break off trees; Difficult to walk
9	47-54	Strong Gale - High waves with wave crests that tumble; Dense streaks of foam in wind; Poor visibility from spray - Slight structural damage
10	55-63	Storm - Very high waves with long, curling crests; Sea surface appears white from blowing foam; Heavy tumbling of sea; Poor visibility - Trees broken or uprooted; Considerable structural damage
11	64-73	Violent Storm - Waves high enough to hide small and medium sized ships; Sea covered with patches of white foam; Edges of wave crests blown into froth; Poor visibility - Seldom experienced inland; Considerable structural damage
12	>74	Hurricane - Sea white with spray. Foam and spray render visibility almost non-existent - Widespread damage. Very rarely experienced on land.

## Santa Ana Winds and Tornado-Like Wind Activity

Based on local history, most incidents of high wind in the City of Signal Hill are the result of the Santa Ana and El Niño related wind conditions. While high impact wind incidents are not frequent in the area, significant wind events and sporadic tornado activity have been known to negatively impact the City. In addition, the City is increasingly concerned with “global warming” ramifications and potential increases in wind related events.

### What are Santa Ana Winds?

“Santa Ana winds are generally defined as warm, dry winds that blow from the east or northeast (offshore). These winds occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles and Orange County basins. Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon (the canyon from which it derives its name). Forecasters at the National Weather Service offices in Oxnard and San Diego usually place speed minimums on these winds and reserve the use of “Santa Ana” for winds greater than 25 knots.” These winds accelerate to speeds of 35 knots as they move through canyons and passes, with gusts to 50 or even 60 knots.

“The complex topography of Southern California combined with various atmospheric conditions create numerous scenarios that may cause widespread or isolated Santa Ana events. Commonly, Santa Ana winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah). Clockwise circulation around the center of this high pressure area forces air downslope from the high plateau. The air warms as it descends toward the California coast at the rate of five degrees F per 1,000 feet due to compressional heating. Thus, compressional heating provides the primary source of warming. The air is dry since it originated in the desert, and it dries out even more as it is heated.”



These regional winds typically occur from October to March, and, according to most accounts are named either for the Santa Ana River Valley where they originate, or for the Santa Ana Canyon, southeast of Los Angeles, where they pick up speed.

## What are Tornadoes?

Tornadoes are spawned when there is warm, moist air near the ground, cool air aloft, and winds that speed up and change direction. An obstruction, such as a house, in the path of the wind causes it to change direction. This change increases pressure on parts of the house, and the combination of increased pressures and fluctuating wind speeds creates stresses that frequently cause structural failures.

In order to measure the intensity and wind strength of a tornado, Dr. T. Theodore Fujita developed the Fujita Tornado Damage Scale. This scale compares the estimated wind velocity with the corresponding amount of suspected damage. The scale measures six classifications of tornadoes with increasing magnitude from an "F0" tornado to a "F6+" tornado.

**Table: Fujita Tornado Damage Scale**

(Source: NOAA Storm Prediction Center)

Scale	Wind Estimated (mph)	Typical Damage
F0	< 73	Light damage. Some damage to chimneys and TV antennas; breaks twigs off trees; pushes over shallow-rooted trees.
F1	73-112	Moderate damage. Peels surface off roofs; windows broken; light trailer houses pushed or overturned; some trees uprooted or snapped; moving automobiles pushed off the road. 74 mph is the beginning of hurricane wind speed.
F2	113-157	Considerable damage. Roofs torn off frame houses leaving strong upright walls; weak buildings in rural areas demolished; trailer houses destroyed; large trees snapped or uprooted; railroad boxcars pushed over; light object missiles generated; cars blown off highway.
F3	158-206	Severe damage. Roofs and some walls torn off frame houses; some rural buildings completely demolished; trains overturned; steel-framed hangar-warehouse-type structures torn; cars lifted off the ground; most trees in a forest uprooted snapped, or leveled.
F4	207-260	Devastating damage. Whole frame houses leveled, leaving piles of debris; steel structures badly damaged; trees debarked by small flying debris; cars and trains thrown some distances or rolled considerable distances; large missiles generated.
F5	261-318	Incredible damage. Whole frame houses tossed off foundations; steel-reinforced concrete structures badly damaged; automobile-sized missiles generated; trees debarked; incredible phenomena can occur.
F6-F12	319 to sonic	Inconceivable damage. Should a tornado with the maximum wind speed in excess of F5 occur, the extent and types of damage may not be conceived. A number of missiles such as iceboxes, water heaters, storage tanks, automobiles, etc. will create serious secondary damage on structures.

## Microbursts

Unlike tornados, microbursts are strong, damaging winds which strike the ground and often give the impression a tornado has struck. They frequently occur during intense thunderstorms. The origin of a microburst is downward moving air from a thunderstorm's core. But unlike a tornado, they affect only a rather small area. University of Chicago storm researcher Dr. Ted Fujita first coined the term "downburst" to describe strong, downdraft winds flowing out of a thunderstorm cell that he believed were responsible for the crash of Eastern Airlines Flight 66 in June of 1975.

A downburst is a straight-direction surface wind in excess of 39 mph caused by a small-scale, strong downdraft from the base of convective thundershowers and thunderstorms. In later investigations into the phenomena he defined two sub-categories of downbursts: the larger macrobursts and small microbursts.



Macrobursts are downbursts with winds up to 117 mph which spread across a path greater than 2.5 miles wide at the surface and which last from five to 30 minutes. The microburst, on the other hand is confined to an even smaller area, less than 2.5 miles in diameter from the initial point of downdraft impact. An intense microburst can result in damaging winds near 270 km/hr (170 mph) and often last for less than five minutes.

Downbursts of all sizes descend from the upper regions of severe thunderstorms when the air accelerates downward through either exceptionally strong evaporative cooling or by very heavy rain which drags dry air down with it. When the rapidly descending air strikes the ground, it spreads outward in all directions, like a fast-running faucet stream hitting the sink bottom.

When the microburst wind hits an object on the ground such as a house, garage or tree, it can flatten the buildings, and strip limbs and branches from the tree. After striking the ground, the powerful outward running gust can wreak further havoc along its path. Damage associated with a microburst is often mistaken for the work of a tornado, particularly directly under the microburst. However, damage patterns away from the impact area are characteristic of straight-line winds rather than the twisted pattern of tornado damage."

Tornados, like those that occur every year in the Midwest and Southeast parts of the United States, are a rare phenomenon in most of California, with most tornado-like activity coming from micro-bursts.

## What is Susceptible to Windstorms?

### *Life and Property*

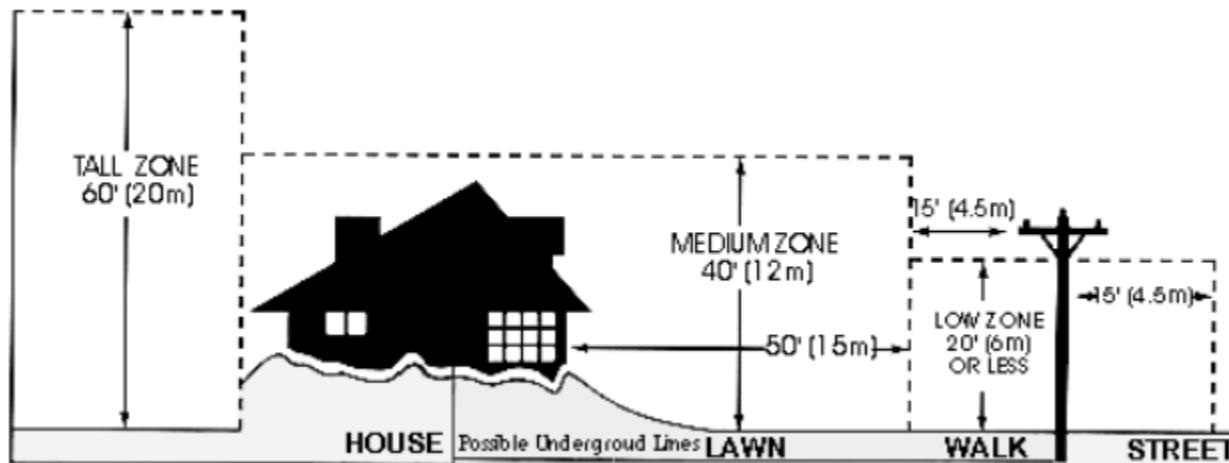
Based on the history of the region, windstorm events can be expected, perhaps annually, across widespread areas of the region which can be adversely impacted during a windstorm event. This can result in the involvement of City emergency response personnel during a wide-ranging windstorm or microburst tornadic activity. Both residential and commercial structures with weak reinforcement are susceptible to damage. Wind pressure creates a direct and frontal assault on a structure, pushing walls, doors, and windows inward. Conversely, passing currents creates lift

suction forces that pull building components and surfaces outward. With extreme wind forces, the roof or entire building can fail causing considerable damage.

Debris carried along by extreme winds can directly contribute to loss of life and indirectly to the failure of protective building envelopes, siding, or walls. When severe windstorms strike a City, downed trees, power lines, and damaged property can be major hindrances to emergency response and disaster recovery.

## Utilities

Historically, falling trees are the major cause of power outages in the region. Windstorms such as strong microbursts and Santa Ana Wind conditions cause flying debris and downed utility lines. For example, tree limbs breaking in winds of only 45 mph can be thrown over 75 feet, overhead power lines are damaged, even in relatively minor windstorm events. Falling trees bring electric power lines down to the pavement, creating the possibility of lethal electric shock.



## Infrastructure

Windstorms damage buildings, power lines, and other property, and infrastructure, due to falling trees and branches. During wet winters, saturated soils cause trees to become less stable and more vulnerable to uprooting from high winds.

## Increased Fire Threat

Perhaps the greatest danger from windstorm activity in Southern California comes from the combination of the Santa Ana winds with the major fires that occur every few years in the urban/wildland interface. With the Santa Ana winds driving the flames, the speed and reach of the flames is even greater than in times of calm wind conditions.

## Transportation

Windstorm activity impacts local transportation in addition to the problems caused by downed trees and electrical wires blocking streets and highways. During periods of extremely strong Santa Ana winds, major highways can be temporarily closed to truck and recreational vehicle traffic. However, typically these disruptions are not long lasting, nor do they carry a severe long term economic impact on the region.

## Drought Hazards



## Hazard Characteristics

### *Definition*

Drought is defined as a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average condition of balance between precipitation and evapotranspiration (i.e., evaporation + transpiration) in a particular area, a condition often perceived as "normal". It is also related to the timing (e.g., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness of the rains (e.g., rainfall intensity, number of rainfall events). Other climatic factors such as high temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly aggravate its severity. Drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental impacts and personal hardships have underscored the vulnerability of all societies to this "natural" hazard.

One dry year does not normally constitute a drought in California, but serves as a reminder of the need to plan for droughts. California's extensive system of water supply infrastructure - its reservoirs, groundwater basins, and inter-regional conveyance facilities - mitigates the effect of short-term dry periods for most water users. Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.

Many governmental utilities, the National Oceanic and Atmospheric Administration (NOAA), and the California Department of Water Resources, as well as academic institutions such as the University of Nebraska-Lincoln's National Drought Mitigation Center and the National Drought Mitigation Center, generally agree that there is no clear definition of drought. Drought is highly variable depending on location.

### *Drought Threat*

The region's Mediterranean climate makes it especially susceptible to variations in rainfall. Severe water shortages could have a bearing on the economic well-being of the community. Comparison of climate (rainfall) records from Los Angeles with water well records beginning in 1930 from the San Gabriel Valley indicates the existence of wet and dry cycles on a 10-year scale as well as for much longer periods. The climate record for the Los Angeles region beginning in 1890 suggests drying conditions over the last century. With respect to the present day, climate data also suggests that the last significant wet period was the 1940s. Well level data and other sources seem to indicate the historic high groundwater levels (reflecting recharge from rainfall) occurred in the same decade. Since that time, rainfall (and groundwater level trends) appears to be in decline. This slight declining trend, however, is not believed to be significant. Climatologists compiled rainfall data from 96 stations in the State that spanned a 100-year period between 1890 and 1990. An interesting note is that during the first 50 years of the reporting period, there was

only one year (1890) that had more than 35 inches of rainfall, whereas the second 50-year period recording of 5 year intervals (1941, 1958, 1978, 1982, and 1983) that exceeded 35 inches of rainfall in a single year. The year of maximum rainfall was 1890 when the average annual rainfall was 43.11 inches. The second wettest year on record occurred in 1983 when the State's average was 42.75 inches.

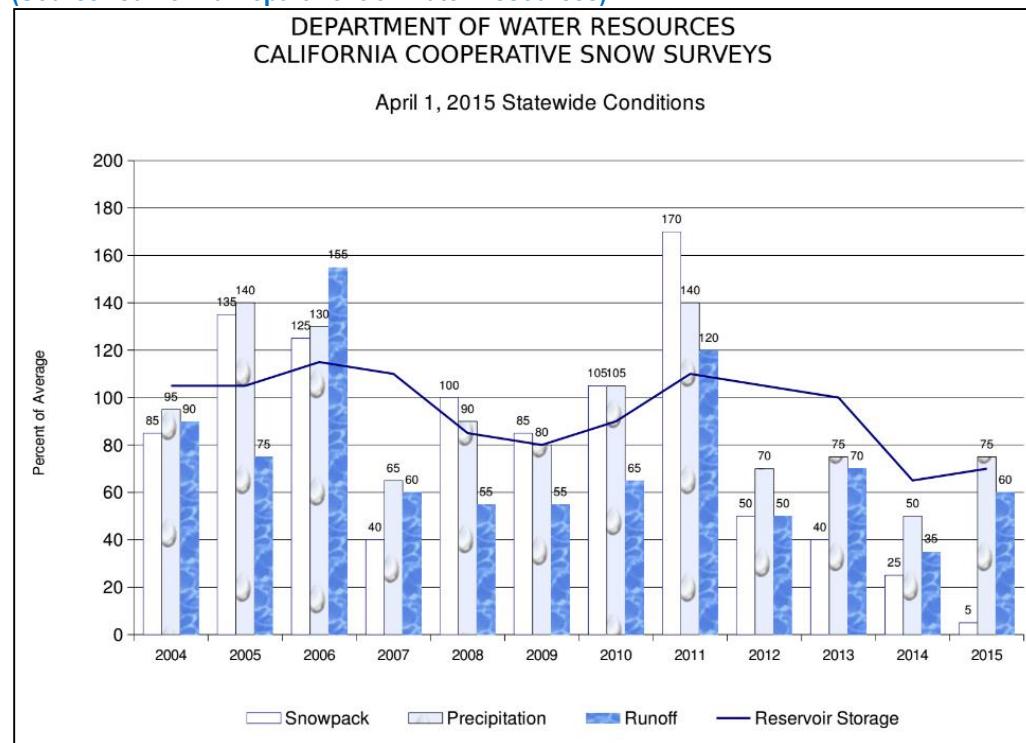
The driest year of the 100-year reported in the study was 1924 when the State's average rainfall was only 10.50 inches. The region with the most stations reporting the driest year in 1924 was the San Francisco Bay area. The second driest year was 1977 when the average was 11.57 inches. The most recent major drought (1987 to 1990) occurred at the end of a sequence of very wet years (1978 to 1983). The debate continues whether "global warming" is occurring, and the degree to which global climate change will have an effect on local micro-climates. The semi-arid southwest is particularly susceptible to variations in rainfall. A study that documented annual precipitation for California since 1600 from reconstructed tree ring data indicates that there was a prolonged dry spell from about 1755 to 1820 in California. Fluctuations in precipitation could contribute indirectly to a number of hazards including wildfire and the availability of water supplies.

## General Situation

**Figure: Water Supply Conditions** below illustrates several indicators commonly used to evaluate California water conditions. The percent of average values are determined for measurement sites and reservoirs in each of the State's ten major hydrologic regions. Snow pack is an important indicator of runoff from Sierra Nevada watersheds, the source of much of California's developed water supply.

**Figure: Water Supply Conditions**

(Source: California Department of Water Resources)





Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends.

## Types of Drought

There are four different ways that drought can be defined:

- (1) Meteorological - a measure of departure of precipitation from normal. Due to climatic differences what is considered a drought in one location may not be a drought in another location.
- (2) Agricultural - refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop.
- (3) Hydrological - occurs when surface and subsurface water supplies are below normal.
- (4) Socioeconomic - refers to the situation that occurs when physical water shortage begins to affect people.

### *Historical California Droughts*

A significant drought, reported by many of the ranchers in southern California, occurred in 1860. The great drought of the 1930s, coined the "Dust Bowl," was geographically centered in the Great Plains yet ultimately affected water shortages in California. The drought conditions in the plains resulted in a large influx of people to the west coast. Approximately 350,000 people from Arkansas and Oklahoma immigrated mainly to the Great Valley of California. As more people moved into California, including Los Angeles County increases in intensive agriculture led to overuse of the Santa Ana River watershed and groundwater resulting in regional water shortages. Several bills have been introduced into Congress in an effort to mitigate the effects of drought. In 1998, President Clinton signed into law the National Drought Policy Act, which called for the development of a national drought policy or framework that integrates actions and responsibilities among all levels of government. In addition, it established the National Drought Policy Commission to provide advice and recommendations on the creation of an integrated federal policy. The most recent bill introduced into Congress was the National Drought Preparedness Act of 2003, which established a comprehensive national drought policy and statutorily authorized a lead federal utility for drought assistance. Currently there exists only an ad-hoc response approach to drought unlike other disasters (e.g., hurricanes, floods, and tornadoes) which are under the purview of FEMA.

Droughts exceeding three years are relatively rare in Northern California, the source of much of the State's developed water supply. The 1929-34 droughts established the criteria commonly used in designing storage capacity and yield of large Northern California reservoirs. The driest single year of California's measured hydrologic record was 1977. According to USGS, California's most recent multi-year droughts occurred between 1987-92, 2006-2010 and 2012-2016.

### *The Long-term Climatic Viewpoint*

The historical record of California hydrology is brief in comparison to geologically modern climatic conditions. The following sampling of changes in climatic conditions over time helps put California's twentieth century droughts into perspective. Most of the dates shown below are necessarily approximations.



Not only must the climatic conditions be inferred from indirect evidence, but the onset or extent of changed conditions may vary with geographic location. Readers interested in the subject of paleo-climatology are encouraged to seek out the extensive body of popular and scientific literature on this subject.

### *Past California Droughts*

The historical record of California hydrology is brief in comparison to the time period of geologically modern climatic conditions. The following samplings of changes in climatic and hydrologic conditions help put California's twentieth century droughts into perspective, by illustrating the variability of possible conditions. Most of the dates shown below are approximations, since the dates must be inferred from indirect sources.

#### *11,000 years before present*

Beginning of Holocene Epoch- Recent time, the time since the end of the last major glacial epoch.

#### *6,000 years before present*

Approximate time when trees were growing in areas now submerged by Lake Tahoe. Lake levels were lower then, suggesting a drier climate.

#### *900-1300 A.D. (Approximate)*

The Medieval Warm Period, a time of warmer global average temperatures. The Arctic ice pack receded, allowing Norse settlement of Greenland and Iceland. The Anasazi civilization in the Southwest flourished, its irrigation systems supported by monsoonal rains.

#### *1300-1800 A.D. (approximate)*

The Little Ice Age, a time of colder average temperatures. Norse colonies in Greenland failed near the start of the time period, as conditions became too cold to support agriculture and livestock grazing. The Anasazi culture began to decline about 1300 and had vanished by 1600, attributed in part to drought conditions that made agriculture infeasible.

#### *Mid - 1500s A.D.*

Severe, sustained drought throughout much of the continental U.S., according to dendrochronology. Drought suggested as a contributing factor in the failure of European colonies at Parris Island, South Carolina and Roanoke Island, North Carolina.

#### *1850s A.D.*

Sporadic measurements of California precipitation began.

#### *1890s A.D.*

Long-term stream flow measurements began at a few California locations.

## Palmer Drought Severity Index

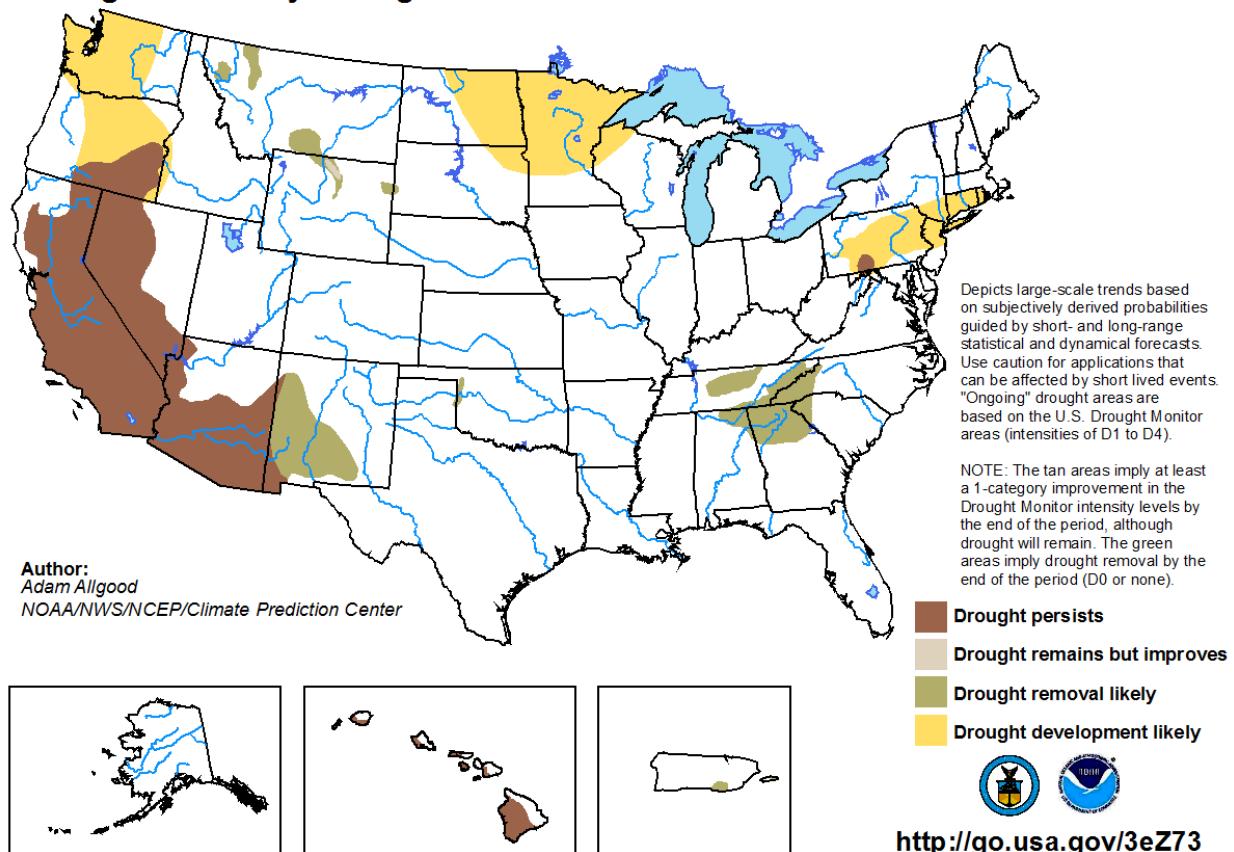
Of the many varied indexes used to measure drought, the "Palmer Drought Severity Index" (PDSI) is the most commonly used drought index in the United States. Developed by meteorologist Wayne Palmer, the PDSI is used to measure dryness based on recent temperature compared to the amount of precipitation. It utilizes a number range, 0 as normal, drought shown in terms of minus numbers, and wetness shown in positive numbers. The PDSI is most effective at analyzing long-range drought forecasts or predictions. Thus, the PDSI is very effective at evaluation trends in the severity and frequency of prolonged periods of drought, and conversely wet weather. The National Oceanic and Atmospheric Administration (NOAA) publish weekly Palmer maps, which are also used by other scientists to analyze the long-term trends associated with global warming and how this has affected drought conditions.

The following map is the most current snapshot of drought conditions across the U.S. It is provided by NOAA's Climate Prediction Center.

**Map: U.S. Seasonal Drought Outlook**  
(Source: NOAA Climate Prediction Center)

### U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for May 19 - August 31, 2016  
Released May 19, 2016





## Attachments

### FEMA Letter of Approval



## City Council Staff Report



## City Council Resolution



## Planning Team Sign-In Sheets

**City of Signal Hill**  
**Hazard Mitigation Planning Team Meeting #1**  
**August 10, 2016**

Signal Hill Hazard Mitigation Planning Meeting #2 08-31-2016

Name	Position	
ALY MANCINI	DIR OF COMMUNITY SVCS	AM
Selena Adams	Associate Planner	SA
SCOTT CHARNEY	DIR. OF COMM DEV	SC
MIKE LANGSTON	CHIEF OF POLICE	ML
Charlene Honeycutt	CITY MANAGER	CH
RICHARD JOHNSON	BASER OPS. COORD.	RJ
TERRI MARSH	DIR OF FINANCE	JM
STEVE MYRTER	DIR OF PW	SM



## Web Postings and Notices



## Reference List

C I T Y   O F   S I G N A L   H I L L

# General Plan

# NOISE ELEMENT

**Updated December 2009**

*Prepared by the City of Signal Hill in collaboration with RGP Planning & Development Services*

## ACRONYMS & ABBREVIATIONS

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ALUC	Airport Land Use Commission
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	A-weighted decibel
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
I-405	Interstate 405
$L_{eq}$	Equivalent Energy Noise Level
$L_{max}$	Maximum Noise Level
Metro	Los Angeles County Metropolitan Transportation Authority
PCH	Pacific Coast Highway
SENEL	Single Event Noise Exposure Level
SHMC	Signal Hill Municipal Code

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# I. INTRODUCTION

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## A. Purpose and Scope

The Noise Element of the Signal Hill General Plan provides goals, policy direction, and implementation measures intended to limit the community's exposure to excessive noise levels. This element includes:

- A discussion of the regulatory framework impacting noise elements, including applicable local, State, and federal regulations;
- A discussion of major local noise sources, how noise is measured, and how it can be mitigated; and
- A list of goals, policies, and implementation measures that will serve to effectively reduce negative noise impacts throughout Signal Hill.

To assist the reader, definitions of terms used throughout this document are provided in Table 1, *Noise Element Definitions*.

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TABLE 1    **Noise Element Definitions**

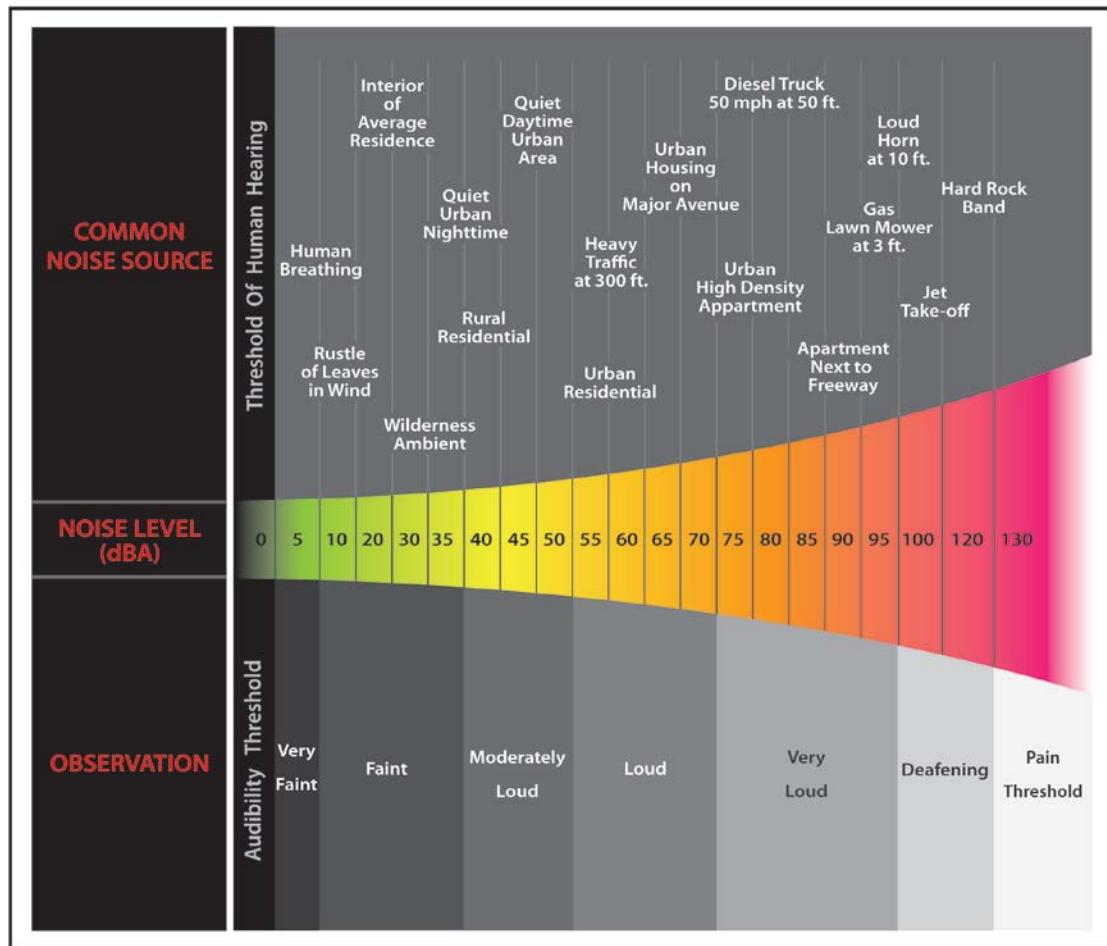
Abbreviation	Term	Definition
	<b>Ambient Noise</b>	The composite of all noise sources; the normal or existing level of environmental noise in a given location.
CNEL	<b>Community Noise Equivalent Level</b>	A 24-hour average $L_{eq}$ with a 10 dBA weighting added during the hours of 10:00 pm and 7:00 am and a 5 dBA weighting added during the hours of 7:00 pm to 10:00 pm to account for noise sensitivity in the evening, nighttime, and early morning.
dB	<b>Decibel</b>	The standard measurement of sound, measured on a logarithmic scale. An increase of 3 dB represents a doubling of sound energy levels.
dBA	<b>Decibel, A-weighted</b>	A measurement unit which weights sounds based on frequency in a manner similar to that of the human ear.
$L_n$	<b>Noise level percentile</b>	The sound level exceeded by $n$ percent of the noise measurement duration. For example, $L_{10}$ indicates that 10

		percent of the noise measurements exceeded this level.
$L_{eq}$	<b>Equivalent Energy Noise Level</b>	The average acoustic energy content of noise for a stated period of time. Thus, the $L_{eq}$ of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.
	<b>Intrusive Noise</b>	That noise which intrudes over the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, time of occurrence, and other factors, as well as the prevailing noise level.
$L_{max}$	<b>Maximum Noise Level</b>	The highest noise level reached during a noise event.
<b>SENEL</b>	<b>Single Event Noise Exposure Level</b>	A measure of the highest noise level during a noise event and the duration of the event.

## B. The Noise Environment

Sound is created when objects vibrate and produce pressure variations that move outward into the surrounding air. The main characteristics of these air pressure waves are amplitude (loudness) and frequency (pitch). Amplitude is measured using decibels (dB). Human sensitivity to sound amplitude is frequency-dependent; A-weighted decibels (dBA) account for this variation in sensitivity. Additionally, a measurement called Community Noise Equivalent Level (CNEL) is used to modify dB and dBA measures to allow for increased sensitivity to noise during evening, nighttime, and early morning hours.

Typical noise levels for various activities are shown in Figure 1, *Typical Noise Environments*.



**Figure 1 Typical Noise Environments**

## C. Regulatory Framework

The State of California has mandated that each city and county prepare a Noise Element as part of its general plan. Section 65302(f) of the California Government Code requires that the element:

[...] identify and appraise noise problems in the community. The Noise Element shall recognize the guidelines established by the Office of Noise Control and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:

1. Highways and freeways.
2. Primary arterials and major local streets.

3. Passenger and freight on-line railroad operations and ground rapid transit systems.
4. Commercial aviation, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
5. Local industrial plants, including, but not limited to, railroad classification yards.
6. Other ground stationary noise sources identified by local agencies as contributing to the community noise environment.

This Noise Element identifies and evaluates current and projected future noise levels for Signal Hill, with a particular emphasis on noise produced by Interstate 405 (I-405, the San Diego Freeway), major roadways, Long Beach Airport, and oilfield operations. Noise levels, which are measured in decibels, are stated in terms of Community Noise Equivalent Level, and contours maps were developed in conformance with State-prescribed noise modeling techniques

## **Noise Level Standards**

Federal, State, and local governments have various responsibilities for measuring and mitigating noise impacts. The following summarizes these standards.

### *Federal Regulations*

The negative impacts of noise were recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

1. Establishing noise emission standards for interstate commerce,
2. Assisting state and local noise abatement activities, and
3. Promoting noise education and research.

Federal noise policies and programs are developed by a range of agencies. A list of the agencies with most relevance to the City of Signal Hill is provided in Table 2, *Federal Agencies with Noise Policies Affecting Signal Hill*.

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**TABLE 2    Federal Agencies with Noise Policies Effecting Signal Hill**

Agency	Responsibility
<b>Federal Aviation Administration (FAA)</b>	Regulates noise generated by aircraft and airports, including Long Beach Airport.
<b>Federal Transit Administration (FTA)</b>	Regulates operations of rail systems receiving federal funding, including light rail lines operated by the Metropolitan Transportation Authority (Metro). Regulates transit noise, including Long Beach Transit buses.
<b>Federal Highway Administration (FHWA)</b>	Regulates freeways that are part of the interstate highway system, including the I-405.
<b>Department of Labor (DOL)</b>	Establishes noise standards for workplaces.
<b>Department of Housing and Urban Development (HUD)</b>	Establishes noise standards for federally-assisted housing projects.

***State Regulations***

State codes related to noise abatement primarily concern noise from airports, aircraft, and vehicles. A list of State codes related to noise is provided in Table 3, *State Codes Regulating Noise*.

One of the major noise sources identified by the State is airports. California Code of Regulations (CCR) Title 21 requires each county in California to establish an Airport Land Use Commission (ALUC); the ALUC for Los Angeles County is the Regional Planning Commission. The ALUC is responsible for protecting public health, safety, and welfare by ensuring the orderly development of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public use airports.

---

**TABLE 3    State Codes Regulating Noise**

Code	Regulations
<b>CCR, Title 21</b>	Regulates noise levels for land uses in the vicinity of airports.
<b>CCR, Title 24 (California Building Standards Code)</b>	Regulates noise insulation measures in residential construction.
<b>California Vehicle Code</b>	Regulates noise levels from motor vehicles.

***Local Regulations***

Noise is regulated in Signal Hill by Chapter 9.16 (Noise Ordinance) of the Signal Hill Municipal Code (SHMC). The Noise Ordinance establishes standards related to:

- Construction of or repairs to buildings.
- Vehicular and industrial noise sources.
- Machinery and equipment which emit noise beyond the property lines of the facility operating them.
- New residential construction near oil wells.
- Servicing and redrilling of existing oil wells.

Additional noise regulation is provided in Chapters 16.16 (Drilling Standards) and 16.20 (Operating and Safety Standards) of the Oil Code in the SHMC.

Noise regulations established by the City of Long Beach also affect noise levels in Signal Hill. The City of Long Beach has implemented an Airport Noise Compatibility Ordinance (Chapter 16.43, Long Beach Municipal Code) which effectively limits noise for neighborhoods in both Long Beach and Signal Hill. The Airport Noise Compatibility Ordinance has two major components which substantially limit noise impacts:

- Establishment of a Single Event Noise Exposure Level (SENEL) standard for non-governmental aircraft operating at the airport. These noise limits vary by time of day and runway location, with lower limits during evening and night hours and on runways whose flight paths have a greater impact on noise-sensitive land uses.
- Requiring the Airport to comply with a “noise budget,” which limits the noise contributions of various types of airport users.

## **D. Relationship to Other Elements**

General plan elements provide important policy guidance to assist in decision-making. All of the elements of the general plan are related and interdependent to some degree. However, the Noise Element is closely related to the Land Use, Housing, Circulation, and Environmental Resources elements.

The objective of the Noise Element is to provide guidelines to achieve noise-compatible land use. The Land Use and Noise Elements are, therefore, closely related. The noise element, by identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise, will influence the general distribution, location, and intensity of future land use. Effective land use planning can alleviate noise problems.

Residential areas are one of the most noise-sensitive land uses found in the city; therefore, the Housing Element is directly affected by the Noise Element. The housing element policies and programs should include safeguards against noise intrusion. Enforcement of land use and noise compatibility guidelines can reduce noise impacts in residential locations. In addition, effective noise insulation in housing construction can mitigate exterior-to-interior noise transmission.

The circulation system within a city is one of the major sources of noise. The existing and future circulation system identified in the circulation element will, therefore, greatly influence the noise environment. The circulation routes, such as the freeway, highways, and truck routes, should be located to minimize noise impacts upon noise-sensitive land uses. The location and design of new transportation facilities and possible mitigation of noise from existing and planned facilities will greatly influence the overall noise environment within the city.

Since noise can adversely affect the enjoyment of quiet outdoor activities, the noise element is also closely related to the Environmental Resources Element. Open spaces can be used as a noise buffer between incompatible land uses. This technique can reduce community noise impacts and also provide usable open space for recreation and visual relief.

## E. Element Organization

This element is organized into four sections:

**Section I, Introduction** – a discussion of the purpose and scope, regulatory framework, and organization of this document.

**Section II, Defining and Measuring Noise** – a discussion of existing noise sources in the area, noise measurement methods, noise sensitive receptors, and noise attenuation methods.

**Section III, Goals and Policies** – goals and policies which will serve to minimize noise impacts.

**Section IV, Implementation Program** – a list of specific, practical action steps that, when implemented, achieve the goals and policies identified in Section III.

**Section V, Enforcement** – a discussion of mechanisms available to enforce the City's adopted noise standards.

## II. DEFINING AND MEASURING NOISE

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### A. Noise Sources

The noise environment comprises background, or ambient, noise and intrusive noise sources.

The following discussion of intrusive noise sources developed from an analysis of noise measurements and noise contours, and from discussions with City staff. The major noise sources in the Signal Hill vicinity, as shown in Figure 2, *Major Noise Sources*, include roadways, the Long Beach Airport, and oil drilling and maintenance operations.

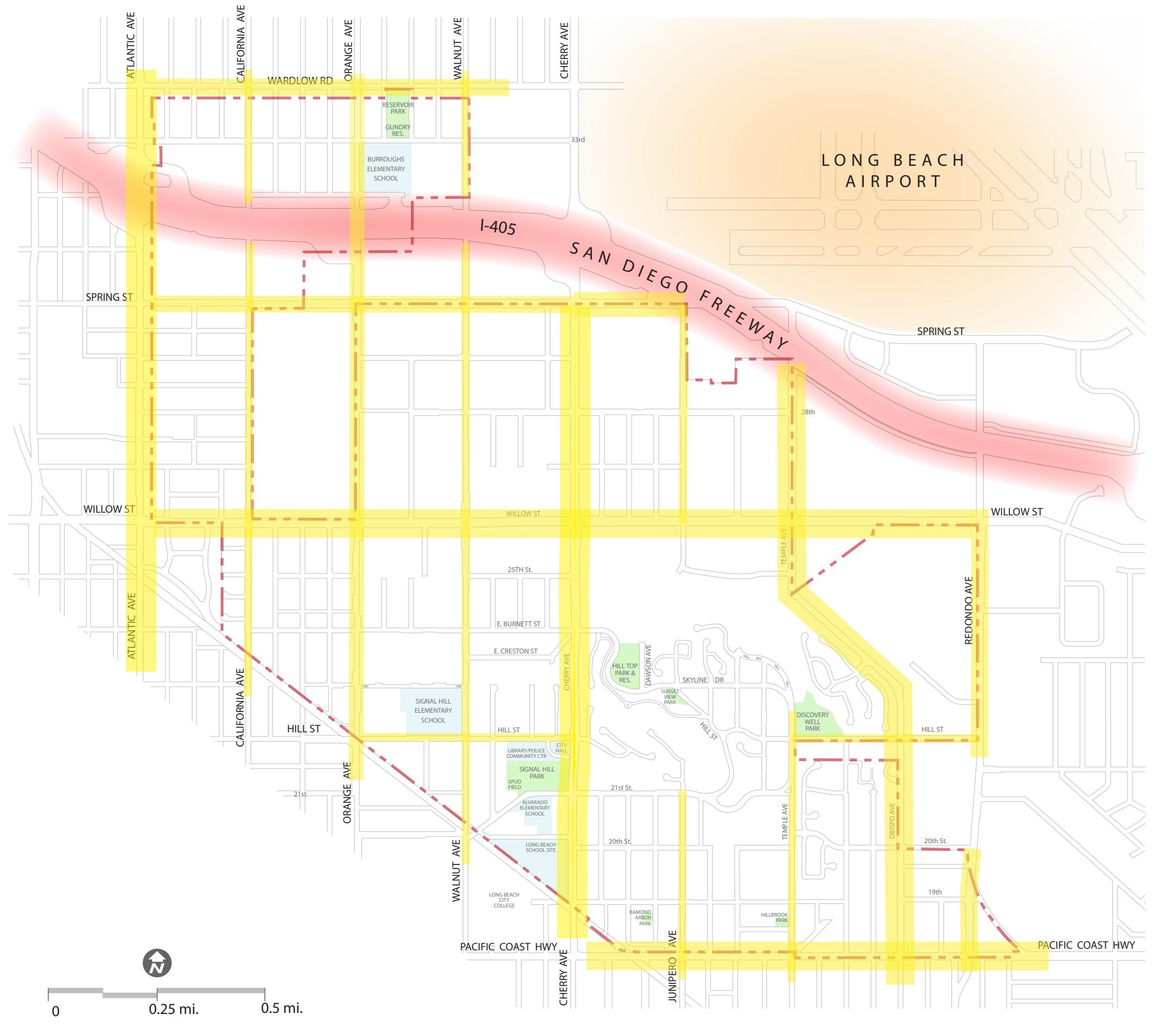
#### Roadways

Roadways are one of the major sources of noise in Signal Hill. The I-405 is the most heavily trafficked roadway in Signal Hill, and produces the most noise. However, because the highway is placed below-grade where it runs through the city, and because the City successfully lobbied Caltrans to construct a sound wall to protect the North End Neighborhood, noise impacts on adjacent uses are reduced. Principal Arterial and Minor Arterial also carry significant amounts of traffic and may produce high noise levels. Collector and Local Streets carry much less traffic and generally do not exceed noise standards.



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- Noise Sources**
- Major Roadways
- I-405 Freeway
- Long Beach Airport

City of Signal Hill Boundary

*Note: Oil operations occur throughout the city and are not depicted on this map.*

Figure 2  
**Major Noise Sources**

## Long Beach Airport

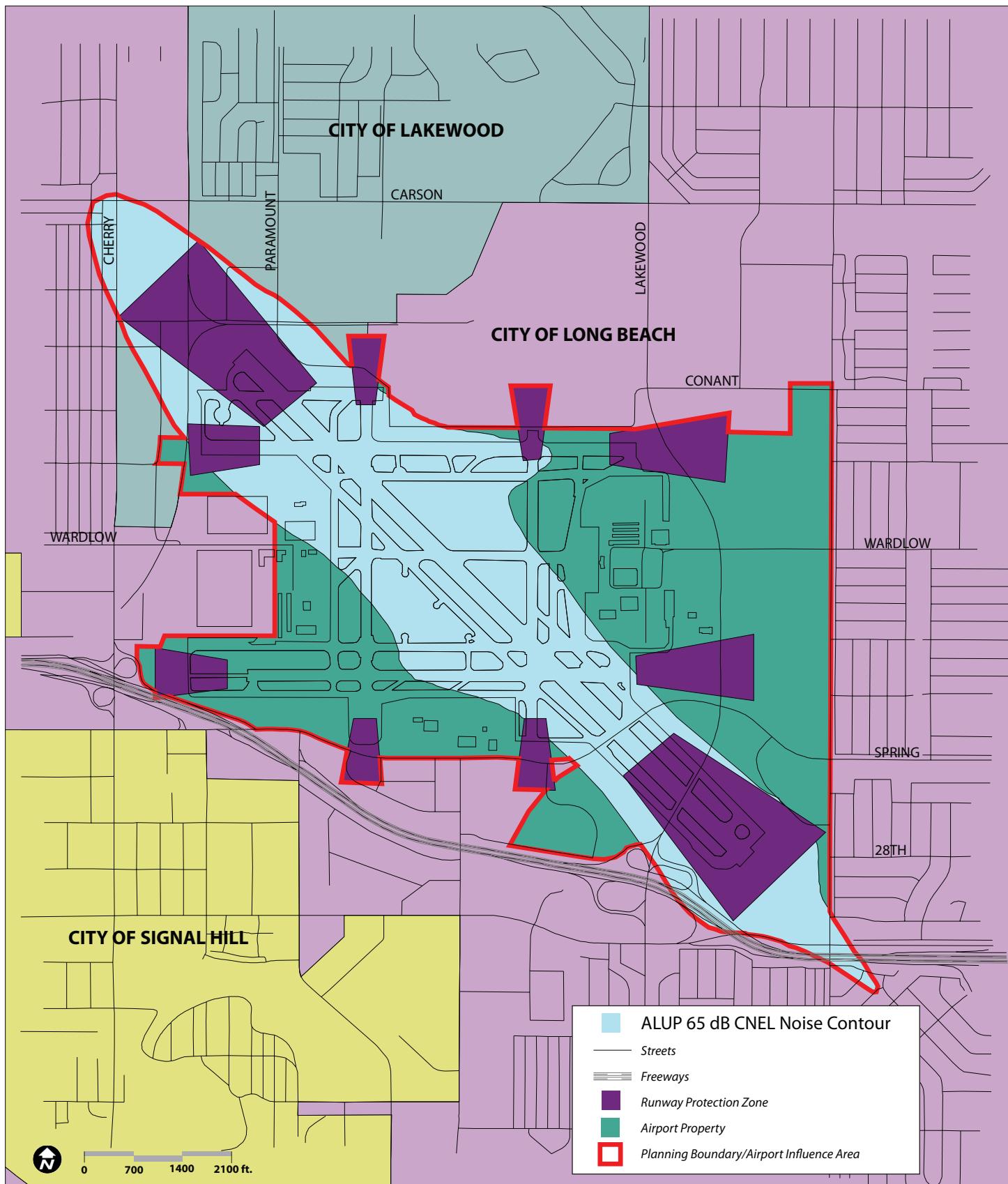
Long Beach Airport is located approximately ½ mile northeast of Signal Hill. The airport, which is owned by the City of Long Beach, primarily serves commercial, air cargo, and general aviation users. Annual aircraft operations trends are detailed in Table 4, *Long Beach Airport Annual Aircraft Operations*.

TABLE 4    **Long Beach Airport Annual Aircraft Operations**

	2008	2007	2006	% Change (2006-2008)
<b>Passengers</b>	<b>2,913,926</b>	<b>2,906,556</b>	<b>2,758,362</b>	<b>5.6%</b>
<b>Cargo Traffic (tons)</b>	<b>46,263</b>	<b>51,652</b>	<b>49,947</b>	<b>-4.9%</b>
<b>Air Operations</b>	<b>344,897</b>	<b>398,433</b>	<b>369,738</b>	<b>-6.7%</b>
<i>Air Carrier</i>	30,205	26,636	25,833	16.9%
<i>Air Taxi</i>	13,781	11,546	9,431	46.1%
<i>General Aviation</i>	299,460	359,580	333,824	-10.3%
<i>Military</i>	1,451	671	650	123.2%

After a significant increase in passenger travel early in the 2000s, travel has remained stable in recent years, ranging from approximately 2.7 million to 3.0 million passengers per year. Air cargo transport has similarly been stable, at approximately 46,000 to 52,000 tons per year. The number of air operations (arrivals and departures) can fluctuate widely from year to year, as general aviation uses are highly variable. The Southern California Association of Governments' 2008 Regional Transportation Plan Airport and Aviation Ground Access Report forecasts that airport passenger traffic will increase to 4.2 million passengers per year in 2035; air cargo traffic is forecast to increase from 50,000 tons per year to 139,000 tons per year in 2035.

CCR, Title 21 establishes a maximum 65 dB CNEL noise exposure level around airports for sensitive land uses such as homes, schools, hospitals, and places of worship. Airport noise contours are mapped by the ALUC; a map depicting Long Beach Airport's 65 dB CNEL noise contour is provided in Figure 3, *Long Beach Airport Influence Area*. The map shows that Signal Hill currently lies completely outside of the airport's 65 dB CNEL noise contour line.



City of Signal Hill  
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**Figure 3**  
**Long Beach Airport**  
**Influence Area**

The City of Long Beach maintains an Airport Noise and Operations Monitoring System, which performs 24-hour monitoring of noise levels from 18 sites in the airport area. Noise violations are tracked, and fines are assessed to air carriers, commuter flights, charter flights, and general aviation aircraft which exceed noise standards established by the Long Beach Municipal Code. Complaints received from members of the public are also tracked and compiled by ZIP code, with monthly updates published on the Airport's website. For the six-month period from December 2008 through May 2009, a total of 1,014 complaints were received, with only six (fewer than one percent of all complaints) coming from within the city of Signal Hill's ZIP code of 90755. The small number of complaints from within Signal Hill suggests that airport noise is not a major concern for city residents.

## **Oil Operations**

Drilling, pumping, and well-servicing operations occur throughout the city and are regulated by the SHMC Oil Code and Zoning Ordinance. Noise levels from these sources vary depending on the type and maintenance of the equipment involved. The SHMC prohibits the drilling of new wells in residential districts. However, existing wells and drill sites are interspersed with residential and other noise-sensitive land uses and wells are sometimes located close to homes. This creates potential noise conflicts.

### *Operations*

Most pumping units operate with electric motors to reduce noise; however, occasionally, a unit may develop an audible annoying squeak if a lubricated joint becomes dry between scheduled maintenance periods. Periodic well servicing, generally lasting from three to five days, is necessary to maintain petroleum production but produces short-term noise disruptions. In the past, operators have been responsive to citizen or City complaints to service or repair noisy units. Well servicing in residential areas is limited to weekdays from 7:00 am to 7:00 pm. The City maintains contact information for the operators to facilitate repairs should a citizen complaint be filed, and oil operators' emergency contact information is posted on all well enclosures. As part of the update to this Noise Element, the City conducted noise measurements of a typical pumping unit (Redrill Well 17-7) on August 17, 2009; the results of these noise measurements are presented in Table 5, *Oil Derrick Noise Measurements*. The

measurement locations shown in the table are at the boundaries of the well enclosure. Figure 4, *Typical Oil Well Redrilling Noise Levels*, graphically depicts the contours listed in the table.

### **Drilling and Redrilling Activities**

Well drilling and redrilling activities are considerably noisier than typical pumping operations because the power source is a large, portable generator powered by an internal combustion engine. Redrilling noise can be perceived as intrusive to a radius of 150 feet from the rig.

Drilling or redrilling of wells is accomplished with multiple pieces of equipment working in support of the drill rig itself. Drilling and redrilling generally produce the same level of noise, but redrilling takes a shorter period of time.

Noise testing was performed during redrilling operations conducted at a well in the parking lot of the Costco/The Home Depot center located at the southeast corner of Cherry Avenue and Willow Street. Testing locations were along the fence of the derrick enclosure, a chain-link fence. This well is located in an open area, with no buildings or topographical changes impacting noise levels. The testing revealed that a marked variation in noise levels occurs in the vicinity of the well. Major factors influencing noise levels are distance from the generators and intervening barriers, such as buildings.

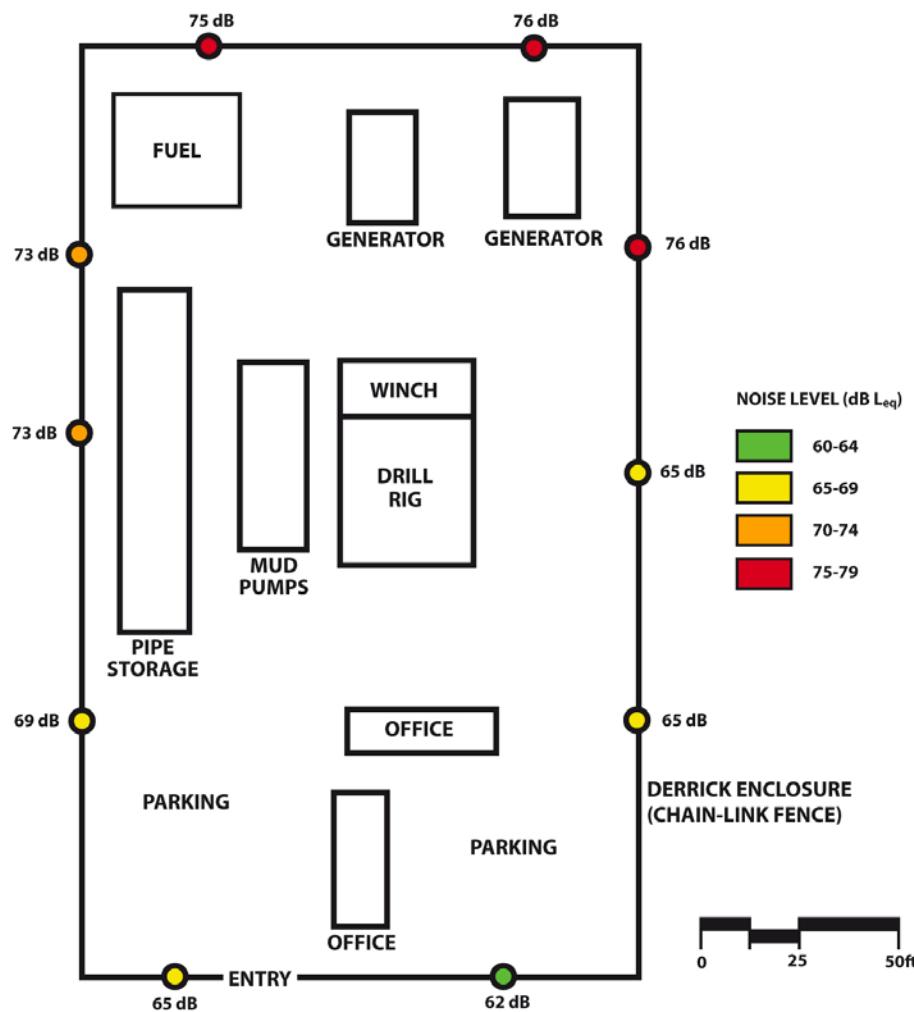
**TABLE 5    Oil Derrick Noise Measurements**

Location		$L_{eq}$	$L_{max}$	$L_{min}$
120'	SSW	65	75	60
120'	SSE	62	70	58
80'	SE	65	76	60
60'	E	68	86	62
80'	NE*	76	78	74
120'	NNE*	76	81	75
120'	NNW*	75	78	74
80'	NW	73	82	70
60'	W	73	77	71
80'	SW	69	79	62

\* Closest to generator trailers.

As shown in Figure 4, the generator noise of 76 dB  $L_{eq}$  derived from an apparent source location approximately 30 feet from the measurement point. The distance of noise intrusion (65 dB  $L_{eq}$ ) is

approximately 100 feet from the source. With the use of high-quality mufflers on the generators, the area of substantial well drilling noise impact is relatively small.



**Figure 4 Typical Oil Well Redrilling Noise Levels**

## Other Noise Sources

Other noise sources impacting Signal Hill include:

- **Commercial and industrial uses.** In general, these operations and activities are not considered a citywide noise problem. Isolated conflicts occur where commercial and industrial uses are located near noise-sensitive sites. Additionally, the Noise Ordinance, Zoning Ordinance, and other portions of the SHMC provide standards that limit noise production from commercial and industrial uses.

- **Construction.** Construction noise can be annoying to noise-sensitive land uses; however, construction noise is typically short-term. The Noise Ordinance generally restricts construction to weekdays between 7:00 am and 6:00 pm.

## B. Noise Measurements

Ambient noise measurements were conducted in 1985 during the development of the Noise Element of the Signal Hill General Plan. These measurements focused on differentiating among areas that were predominately residential or commercial/industrial and those that were a mix of multiple uses. The 1985 field survey found that suburban noise-environments in residential areas ranged from 54 to 56 dB Leq. More urbanized areas recorded levels ranging from 56 to 66 dB L<sub>eq</sub>. As a rule of thumb, weighted 24-hour CNEL levels are 2 or 3 dB higher than L<sub>eq</sub> levels during the daytime. Even with this adjustment, any areas of the City exceeding the 65 dB CNEL noise compatibility standard for noise-sensitive uses were highly localized.

An update of the now almost 25-year old field survey was conducted on June 7, 2009. As much as possible, each location from the 1985 survey was revisited to evaluate any historical changes in noise patterns. The locations of the current noise survey are summarized in Table 6, *Short-Term Noise Measurement Locations*. Each noise measurement has been assigned the same number as the 1985 measurement at that approximate location. The results and a comparison to the 1985 survey are shown in Table 7, *Noise Measurement Results by Site*.

Without precise documentation of the 1985 monitoring location, it is difficult to accurately determine historical trends in ambient noise. However, 10 of the 13 monitoring sites recorded an increase in noise levels in the last 25 years. The most typical increase was in the range of 1 to 3 dB. However, even with an increase over time, and adjusting L<sub>eq</sub> to CNEL, residential and mixed use areas have noise exposures considered acceptable for noise-sensitive land uses.

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**TABLE 6 Short-Term Noise Measurement Locations**

Monitor No.	Location
1	Intersection: Lemon & 33 <sup>rd</sup> /Meter Placed on Southwest Corner
2	Intersection: Willow & Signal Parkway/Meter Placed on Northwest Corner
3	Intersection: Burnett & Walnut/Meter Placed on Northwest Corner
4	Signal Hill Library/Meter Placed at Front Entrance
5	Intersection: Junipero & 21 <sup>st</sup> /Meter Placed on Northeast Corner
6	Intersection: Ohio & 21 <sup>st</sup> /Meter Placed on South Side of 21 <sup>st</sup>
7	Intersection: Walnut & Hill/Meter Placed on Northwest Corner, at Signal Hill Elementary
8	Intersection: Burnett & Lemon/Meter Placed on Northeast Corner
9	Intersection: Temple & 19 <sup>th</sup> /Meter Placed on Northeast Corner
10	Intersection: Walnut & 28 <sup>th</sup> /Meter Placed on Northwest Corner
11	Intersection: Hathaway & Llewellyn/Meter Placed on North Side of Hathaway
12	Intersection: Hill & Skyline/Meter Placed on South Side of Skyline
13	Signal Hill City Hall/Meter Placed at East End of Jesse Nelson Circle

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**TABLE 7 Noise Measurement Results by Site**

Site No.	L <sub>max</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>eq</sub>	1985 L <sub>eq</sub>	Δ L <sub>eq</sub>
1	75	63	56	52	60	57	+3
2	84	70	62	56	68	60	+8
3	82	73	68	60	70	67	+3
4	82	70	63	55	67	55	+12
5	76	62	54	48	59	54	+5
6	68	60	53	50	56	55	+1
7	74	64	54	44	60	57	+3
8	65	55	50	46	53	56	-3
9	76	60	54	48	59	60	-1
10	69	64	58	53	60	59	+1
11	79	67	60	55	64	63	+1
12	76	67	61	54	64	56	+8
13	69	60	51	46	56	56	0

Note: All measurements in dB.

L<sub>n</sub> indicates that n percent of noise measurements were above that level. See Table 1 for additional definitions.

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## C. Noise-Sensitive Receptors

Noise-sensitive receptors are those uses that have associated human activities that may be subject to stress or significant interference from noise. Potentially sensitive uses in Signal Hill include residences, schools, churches, and libraries. Table 8, *Noise Compatibility Criteria by Land Use*, presents standards used by the City of Signal Hill in assessing noise compatibility. Figure 5, *Community Noise Exposure Levels*, presents more detailed criteria to assess the compatibility of proposed land uses with the noise environment, as developed by the Governor's Office of Planning and Research.

TABLE 8    **Noise Compatibility Criteria by Land Use**

Land Use	Compatibility Criteria
<b>RESIDENTIAL</b>	
Exterior	Outdoor living areas must be mitigated to 65 dB CNEL or less.
Interior	Habitable rooms must be mitigated to 45 dB CNEL or less.
<b>OTHER NOISE-SENSITIVE USES</b>	
Exterior	Same as residential criterion.
Interior	Same as residential criterion.
<b>COMMERCIAL</b>	
Exterior	A noise level of 70 dB CNEL or less, or one that does not interfere with normal business activity.
<b>INDUSTRIAL</b>	
Exterior	A noise level of 75 dB CNEL or less, or one that does not interfere with normal business activity. Public access areas should be 65 dB CNEL or less.

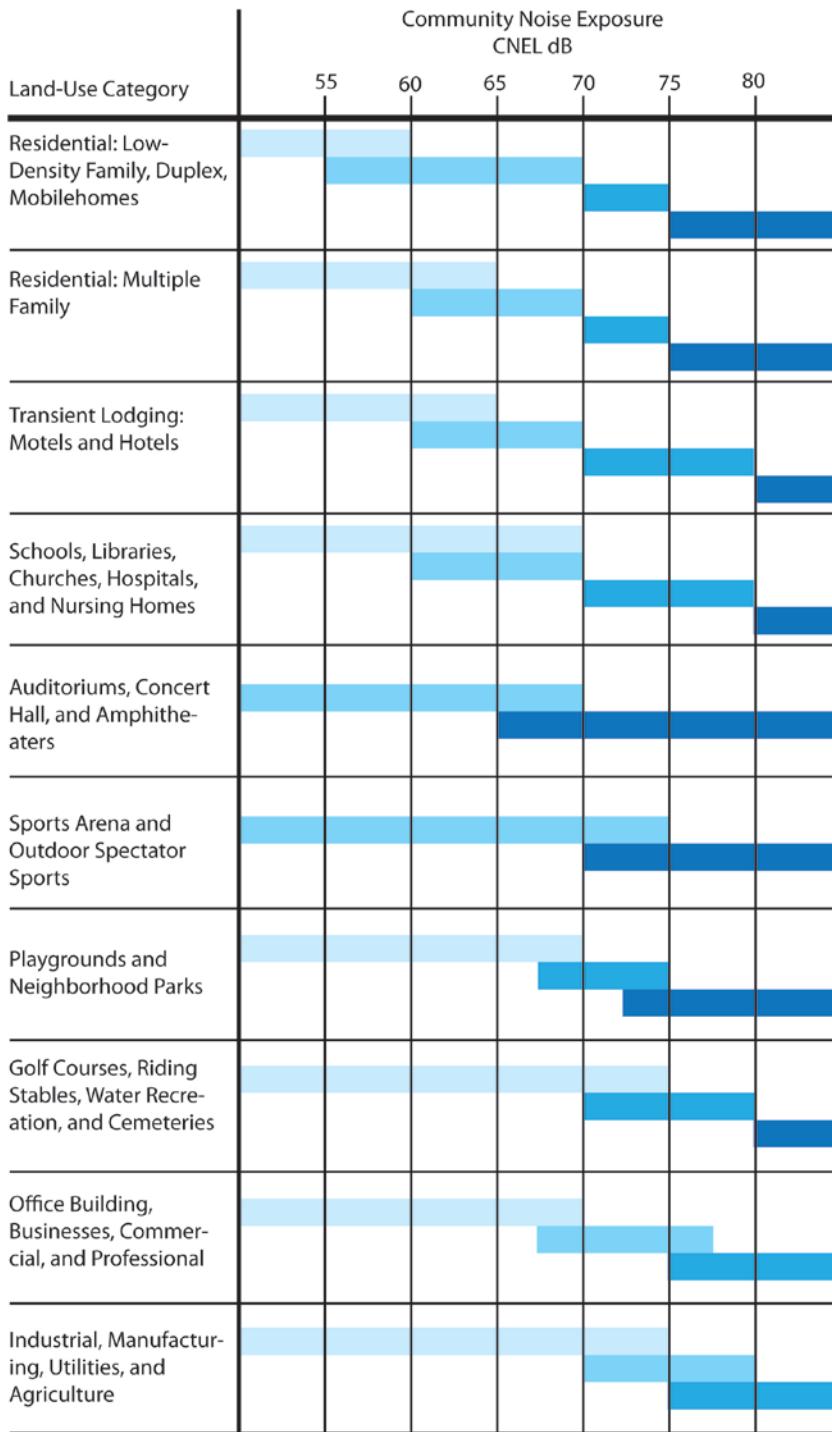
## D. Traffic Noise Levels

The most pervasive noise source in all of Southern California is on-road traffic. The major producers of traffic noise in Signal Hill are the I-405 freeway and arterial roadways.

### I-405 Freeway

Although I-405 is a major traffic noise source, it is shielded from residential and other Signal Hill noise-sensitive uses by grade separation, distance, and intervening structures. Noise-sensitive land uses near the I-405 in Signal Hill include residences in the North End Neighborhood and Burroughs Elementary

# Community Noise Exposure Levels



## Legend:

 **Normally Acceptable:** Specific land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise requirements.

 **Conditionally Acceptable:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

 **Generally Unacceptable:** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

 **Land Use Discouraged:** New construction or development should generally not be undertaken.

*Adapted from General Plan Guidelines, Governor's Office of Planning and Research, 2003.*

**Figure 5 Community Noise Exposure Levels**

School. The limited distance between the uses and the 405 Freeway would normally result in significant noise levels; however, the combination of a depressed freeway, soundwalls, and school buildings set back from the roadway reduce noise to satisfactory levels.

The freeway currently carries almost 300,000 vehicles per day, of which slightly fewer than 10,000 per day are heavy trucks. The calculated mid-day noise level at the edge of the freeway travel lanes using the FHWA traffic noise model is 86 dB L<sub>eq</sub>. Measured freeway noise hum (the 90<sup>th</sup> percentile noise level, October 7, 2009) at various residential locations within the community were compared to the expected noise level that would occur in the absence of grade separation and noise barrier effects. The results are detailed in Table 9, *Expected vs. Observed Freeway Noise Levels*.

**TABLE 9    Expected vs. Observed Freeway Noise Levels**

Location	Distance	Expected dB L <sub>eq</sub>	Observed dB L <sub>eq</sub>	Difference between Expected and Observed
32 <sup>nd</sup> Street/Orange Ave	370'	73	63	-10
Burroughs Elementary School	1,025'	66	52	-14
33 <sup>rd</sup> Street/Lemon Avenue	975'	66	54	-12
32 <sup>nd</sup> Street/California Avenue	440'	72	62	-10
32 <sup>nd</sup> Street/Cerritos Avenue	315'	74	60	-14
Alley behind 32 <sup>nd</sup> Street/Soundwall	205'	76	65	-11

Noise shielding of the community creates sound levels that are 10 to 14 dB lower than the level that would be expected without such protection. The federal noise abatement criterion for noise sensitive land uses is 67 dB L<sub>eq</sub>. Except at the garages on the alley adjacent to the freeway soundwall, the freeway noise level does not approach or exceed this threshold. Should future noise levels rise above 67 dB L<sub>eq</sub>, mitigations such as improved or expanded soundwalls, berms, and noise-reducing pavements may be introduced.

Noise levels are logarithmically proportional to traffic volumes. It takes large changes in volumes to create any perceptible noise level difference. Traffic volume growth from 1995 to 2005 was from 255,000 per day to 295,000 vehicles per day on the I-405 at Orange Avenue. This represents a +0.6 dB theoretical noise level increase. Projecting this change forward, and assuming that the human perception threshold of +3 dB as being clearly louder, it will take 50 years of traffic growth before one might conclude that freeway noise has increased significantly. Therefore, freeway noise does not

currently significantly impact Signal Hill residents closest to the freeway, and that situation is not anticipated to change in the reasonable future.

## Other Roadways

The limited noise impacts of the I-405 suggest that noise within the city derives mainly from principal internal roadways.

Traffic noise levels were calculated for existing traffic volumes detailed in the Circulation Element, which were matched with posted speed limits on all Circulation Element roadways. The federal highway traffic noise prediction model (FHWA-RD-77-108) was initialized with California vehicle noise curves and Southern California day/night and auto/truck mixes. Consistent with projected traffic growth rates for the city, a 1.5 percent annual growth factor was applied for 2010 to 2030 to establish build-out traffic volumes. Because of the logarithmic relationship between traffic volumes and associated noise, future noise levels will be almost indistinguishable for the assumed rate of growth. Table 10, *Roadway Noise Levels*, summarizes existing and future traffic noise levels in terms of the CNEL metric. The acceptable range for noise exposure by land use is presented in Table 8.

Table 11, *Roadway Noise Impact Distances*, and Figure 6, *Traffic Noise Impact Distances*, show that noise from Willow Street, Cherry Avenue, and the portion of Spring Street east of Cherry Avenue impose potentially substantial constraints on placement of noise-sensitive land uses directly adjacent to the roadways. Orange Avenue and the rest of Spring Street are only mildly noisy, with acceptable levels noise levels readily achieved by common noise mitigation methods such as dual-pane windows and enhanced exterior doorways. Noise exposure should also be considered in placement of business or institutional uses along Willow Street, Cherry Avenue, and Spring Street west of Cherry Avenue.

Table 11 summarizes the required distance from the roadway centerline to achieve acceptable noise exposures solely via setbacks for sound propagation across a landscaped surface. Traffic noise should be a consideration in future development planning, but it is not a serious development constraint in Signal Hill with the use of reasonable mitigation.

**TABLE 10 Roadway Noise Levels**

Street Segment		Speed	Existing ADT	Existing CNEL <sup>1</sup>	2030 ADT	2030 CNEL <sup>1</sup>
Spring Street	W of California	40	14,325	68.2	19,339	69.5
	E of California	40	13,140	67.8	17,739	69.1
Willow Street	E of Orange	40	15,029	68.4	20,289	69.7
	E of Walnut	40	14,906	68.3	20,123	69.6
Hill Street	E of Cherry	40	26,892	70.9	36,304	72.2
	W of California	40	31,544	71.6	42,584	72.9
California Avenue	E of California	40	30,481	71.4	41,149	72.7
	E of Orange	40	31,895	71.6	43,058	72.9
Orange Avenue	E of Walnut	40	35,952	72.2	48,535	73.5
	E of Cherry	40	36,706	72.2	49,553	73.5
Walnut Avenue	E of Junipero	40	38,119	72.4	51,461	73.7
	E of Temple	40	32,136	71.7	43,384	73.0
N of 33rd	E of Orange	30	4,101	59.9	5,536	61.2
	E of Walnut	30	4,291	60.1	5,793	61.4
S of 33rd	E of Temple	25	5,265	59.5	7,108	60.8
	E of Obispo	25	7,016	60.8	9,472	62.1
N of Spring	N of 33rd	30	2,440	57.6	3,294	58.9
	S of 33rd	30	2,774	58.2	3,745	59.5
S of Spring	N of Spring	30	3,157	58.7	4,262	60.0
	S of Willow	40	4,112	62.7	5,551	64.0
N of Willow	N of Willow	40	5,737	64.2	7,745	65.5
	S of Willow	30	5,819	61.4	7,856	62.7
N of Hill	N of 33rd	35	15,088	67.0	20,369	68.3
	S of 33rd	35	15,840	67.2	21,384	68.5
S of Spring	N of Spring	35	NA	NA	NA	NA
	S of Willow	35	15,061	66.9	20,332	68.2
N of Willow	N of Willow	40	14,185	68.1	19,150	69.4
	S of Willow	35	14,837	66.9	20,030	68.2
N of Willow	N of Hill	35	15,690	67.1	21,182	68.4
	N of 33rd	30	4,739	60.5	6,398	61.8
N of Spring	S of Spring	35	7,253	63.8	9,792	65.1
	N of Willow	35	6,720	63.4	9,072	64.7

TABLE 10 Roadway Noise Levels

Street Segment	Speed	Existing ADT	Existing CNEL <sup>1</sup>	2030 ADT	2030 CNEL <sup>1</sup>	
S of Willow	35	6,476	63.3	8,743	64.6	
N of Hill	30	8,076	62.8	10,903	64.1	
S of Hill	30	5,845	61.4	7,891	62.7	
Cherry Avenue	S of Spring	40	39,444	72.6	53,249	73.9
	N of Willow	40	40,945	72.7	55,276	74.0
	S of Willow	40	34,661	72.0	46,792	73.3
	N of Hill	40	31,195	71.5	42,113	72.8
	S of Hill	40	29,735	71.3	4,0142	72.6
Junipero Avenue	S of Spring	35	5,153	62.3	6,957	63.6
	N of Willow	35	3,061	60.0	4,132	61.3
	N of PCH	25	2,118	55.6	2,859	56.9
PCH	Cherry – Redondo	35	36,000	70.7	48,000	72.0
Atlantic Avenue	Willow – Wardlow	35	20,900	68.4	27,800	69.6
Temple Avenue	N of Hill	35	12,800(b)	66.2	17,000	67.5
	S of Hill	25	3,910(a)	58.2	4,800	59.1
Obispo Avenue	PCH to Temple	40	8,300	65.8	11,000	67.0
Wardlow Road	Atlantic to Walnut	35	7,270(c)	64.9	12,600	66.2
Redondo Avenue	PCH to Willow	40	27,400	71.0	36,400	72.2
I-405 Freeway	Throughout Signal Hill	65	301,000(e)	74.0 <sup>2</sup>	368,000	74.9 <sup>2</sup>

<sup>1</sup> CNEL in dBA at 50 feet from roadway centerline.

<sup>2</sup> Includes measured -12 dB average decrease from freeway depression and walls.

Note: Traffic volumes from 2004 Traffic Data by Newport Traffic Services and 2001 Long Beach General Plan, except as noted below:

(a) Kroc Center EIR, 2009 turning movements  $\times 10.0$

(b) North of Willow; no data available south of Willow

(c) Realty report, property immediately south of I-405; north side assumed identical

(d) EDCO Recycling MRF Traffic Study, 2009

(e) Caltrans 2008 freeway traffic count

**TABLE 11 Roadway Noise Impact Distances**

Roadway	From	To	60 dB CNEL	65 dB CNEL	70 dB CNEL	75 dB CNEL
Spring	e/o Cherry	-	325'	150'	70'	<50'
" "	w/o California	e/o Walnut	215'	100'	<50'	<50'
Willow	w/o California	e/o Temple	375'	175'	80'	<50'
Cherry	s/o Spring	s/o Hill	385'	180'	85'	<50'
Orange	n/o 33 <sup>rd</sup>	n/o Hill	195'	90'	<50'	<50'
Hill	e/o Orange	e/o Obispo	<110'	<50'	<50'	<50'
Walnut	n/o 33 <sup>rd</sup>	s/o Hill	110'	50'	<50'	<50'
Junipero	s/o Spring	n/o PCH	<110'	<50'	<50'	<50'
California	n/o 33 <sup>rd</sup>	s/o Willow	110'	50'	<50'	<50'
PCH	Cherry	Redondo	325'	150'	70'	<50'
Atlantic	Willow	Wardlow	215'	100'	<50'	<50'
Obispo	PCH	Hill	150'	70'	<50'	<50'
Wardlow	Atlantic	Walnut	130'	60'	<50'	<50'
Redondo	PCH	Willow	325'	150'	70'	<50'
Temple	PCH	Hill	<110'	<50'	<50'	<50'
" "	Willow	29 <sup>th</sup>	160'	75'	<50'	<50'
I-405 Freeway	Temple	Atlantic	495'	230'	105'	50'

*Note: Distances measured from roadway centerlines.*

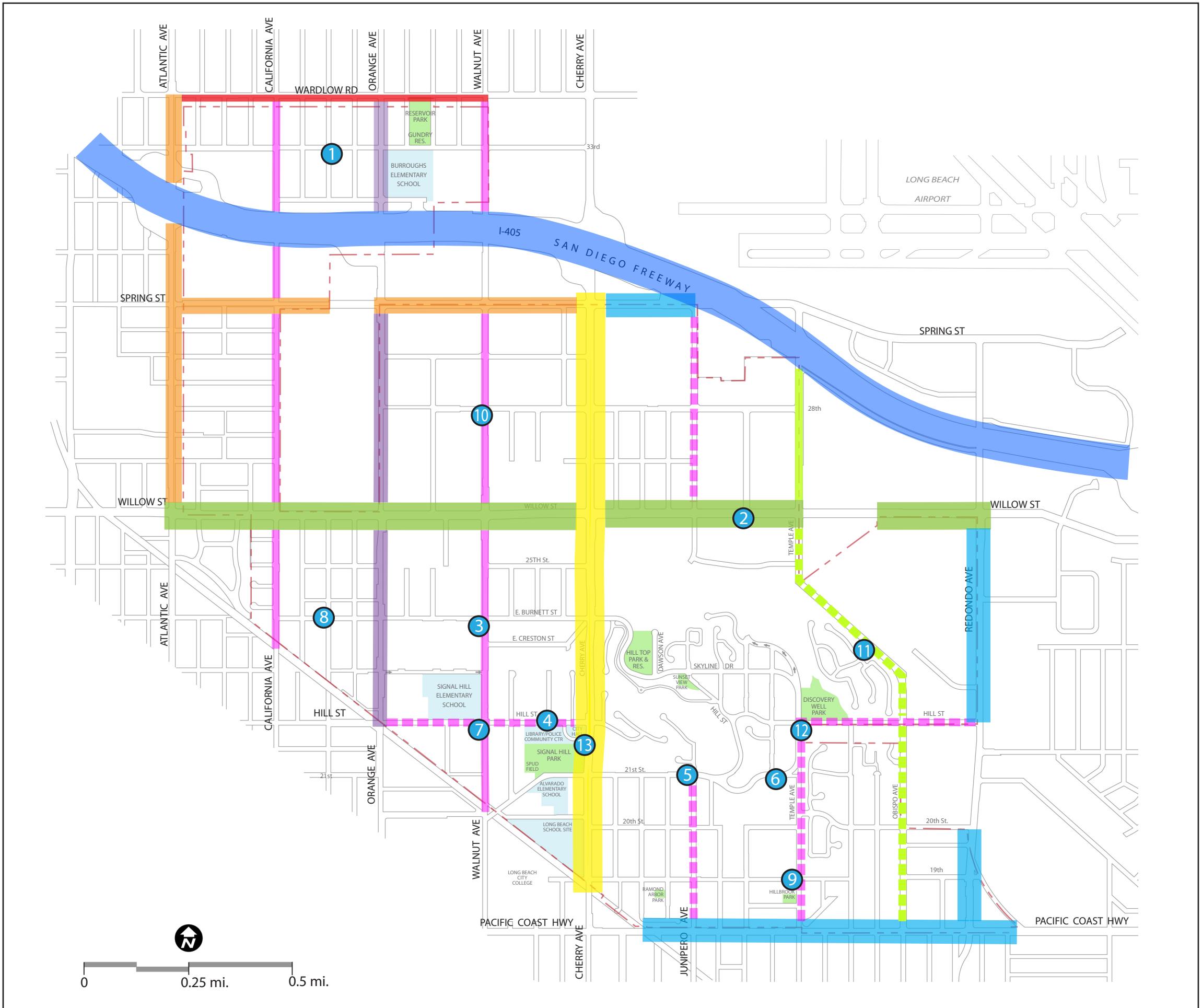


# City of Signal Hill

## **GENERAL PLAN**

# Noise Element

*December 2009*



# Figure 6

## Traffic Noise Impact Distances

## **E. Noise Mitigation Methods**

Various noise mitigation methods may be used to minimize noise impacts on noise-sensitive receptors.

Mitigation methods may include:

- Restrictions on the time and location of noise-producing activities, such as construction;
- Restrictions on unnecessary, excessive, or annoying noise in the city, including noise generated by motor vehicles, machinery, or sound amplification devices;
- Using sound-insulating materials in construction of noise-sensitive facilities in areas where they would be exposed to unacceptable levels of noise;
- Using site planning and the California Environmental Quality Act environmental review process to reduce noise impacts;
- Incorporating noise exposure criteria (such as shown in Figure 5) into land use planning to reduce future noise and land use incompatibilities; and,
- Continued enforcement of noise restrictions located in the Noise Ordinance, Oil Code, and other City regulations.

## **III. GOALS AND POLICIES**

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### **GOAL 1: Protect the health, safety, and welfare of people living and working within the city from adverse noise impacts.**

- Policy 1.a: The City will consider the severity of noise exposure in the community planning process to prevent or minimize noise impacts to existing and proposed land uses.
- Policy 1.b: Noise-compatible commercial and industrial land uses will be planned along the I-405 freeway and major roadways.
- Policy 1.c: Noise-sensitive land uses, including residential, transient lodging, hospitals and long-term care facilities, educational facilities, libraries, churches, and places of public assembly will not be located near major stationary noise sources.
- Policy 1.d: The City will inform those living and working within the city of the effects of noise pollution and will cooperate with all levels of government to reduce or minimize impacts.
- Policy 1.e: Require noise mitigation to ensure that noise-sensitive land uses are not exposed to noise levels of greater than 45 dB in habitable rooms and 65 dB in outdoor living areas.
- Policy 1.f: Where needed, the City will encourage the use of noise mitigation methods that minimize visual impacts and maintain necessary access.
- Policy 1.g: The City will consider planning measures such as reduced street widths and traffic calming to reduce vehicular noise impacts on noise-sensitive land uses.

## IV. IMPLEMENTATION PROGRAM

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This section provides a coordinated set of action plans and programs that serve to implement the goals and policies described in Section III.

TABLE 12 Implementation Program

	Action Plans/Policies	Corresponding Goal/Policy
1	Provide information to the public regarding the effects of high noise levels and means to reduce noise levels and their impacts.	1.d
2	Utilize the site plan review process and California Environmental Quality Act review of new developments to minimize impacts of noise-generating activities whenever feasible.	1.a, 1.c, 1.e, 1.f
3	Review City functions and activities to ensure that noise from concerts, construction, refuse collection, and street cleaning is reduced to the lowest possible level.	1.a
4	Consider the use of noise criteria in the purchase of new equipment by City departments and agencies as part of bid evaluation.	1.a
5	Encourage the federal and State governments to continue to provide standards of allowable industrial noise exposure so that all workers are adequately protected against noise-induced hearing loss.	1.a
6	Review the City's noise ordinance and recommend amendments as needed.	1.d
7	Review the Noise Element and update, if necessary, every five to ten years.	1.a
8	Continue to review County and regional plans for transportation, airport operation, etc. to identify the environmental impact of noise and to develop alternatives for the control of major noise sources on a County and regional basis.	1.a
9	Work closely with Caltrans in the early stages of design modification or expansion of State-owned highways to ensure proper consideration of noise impacts on the city.	1.a, 1.c, 1.f
10	Work with Caltrans to incorporate source noise reduction, barriers, and other design elements for future freeway ramp or access alignments.	1.b, 1.f
11	Continue enforcement procedures to effect compliance with Motor Vehicle Code noise standards for motor vehicles	1.a
12	Review the City's truck routes to limit to the extent practicable truck traffic in noise-sensitive areas.	1.a
13	Support the currently-adopted Aircraft Noise Compatibility Ordinance (Long Beach Municipal Code Chapter 16.43) and noise abatement procedures for Long Beach Airport. Strongly oppose the establishment of flight patterns of aircraft over the city and relocation of runways, which would include noise impacts on land uses in Signal Hill.	1.d

14	Encourage Long Beach Transit to use noise criteria as an important factor in their purchase of new buses.	1.d
15	Mitigate new noise sources to an acceptable exterior level of 65 dB CNEL or less and an interior level in habitable rooms of 45 dB CNEL or less at existing noise-sensitive land uses.	1.a, 1.e
16	Require an acoustical analysis report where the introduction or addition of a new noise source has the potential to result in exterior noise levels exceeding 60 dB CNEL at a noise-sensitive location. The report must show how noise mitigation measures have been incorporated into the design of the new noise source to reduce interior noise levels at noise-sensitive locations to 45 dB CNEL.	1.a, 1.d, 1.e
17	For new residential structures to be located where the predicted CNEL exceeds 60 dB (as shown on Figure 6, <i>Traffic Noise Impact Distances</i> ), require an acoustical analysis assuring that the proposed design will limit exterior noise to allowable levels: 45 dB in any habitable room, and to the extent practicable, 65 dB for outdoor living areas.	1.a, 1.c, 1.d
19	Enforce the California Building Standards Code (CCR, Title 24) for sound transmission between adjacent multifamily dwellings to ensure an acceptable interior noise level of 45 dB CNEL in habitable rooms.	1.a
21	Consider the use of reduced street widths and traffic calming to reduce vehicular noise.	1.g
22	Enforce existing noise ordinance requirements for the construction of new single-family detached or multifamily residential dwellings within 600 feet of an operating well, injection well, or other appurtenant oil field equipment (SHMC Section 9.16.085).	1.e

## V. ENFORCEMENT

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Noise control programs involve federal, State, County, and City agencies, as described in Section I.B, above. Primary responsibility for enforcement of City regulations and guidelines lies with the Community Development Department and the Police Department. The Community Development Department enforces zoning and subdivision ordinances, applies the California Environmental Quality Act, and incorporates the goals, policies, and implementation measures of the Noise Element into the planning process. The Police Department enforces various regulations related to noise control, including the California Vehicle Code.

The City of Signal Hill can achieve a noise-compatible environment through continued comprehensive land-use planning, including the evaluation of potential noise impacts on proposed new development relative to the City's policies and implementation measures. The City's noise compatibility objectives by land use are summarized in Table 8. Proposed residential and other noise-sensitive projects impacted by noise levels of 65 dB CNEL or greater for exterior and 45 dB CNEL for interior noise levels would require additional acoustical analysis and noise mitigations to achieve acceptable exterior and interior noise levels. Noise-sensitive land uses include residential (single- and multi-family dwellings, mobilehome parks, dormitories, and similar uses); transient lodging (hotels, motels, and similar uses); hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; and public or private educational facilities, libraries, churches, and places of assembly. The City will continue to require that proposals near noise-sensitive land uses include an acoustical analysis prepared by a qualified acoustical engineer with experience in environmental noise assessment and noise control design.

The Community Development Department's Building and Safety Division is responsible for continued enforcement of noise insulation standards found in the California Building Code (CCR, Title 24, Part 2). The Division is also responsible for enforcing the Noise Ordinance, which is directed at controlling noise from stationary sources and its intrusion onto adjacent properties. The enforcement of the Noise Ordinance is an effective tool to control non-transportation noise sources.