Potential Economic Impact of Fires from Use of Combustible Material Frame Construction in Mid-Rise Residential Buildings in Los Angeles County, California

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## I. BACKGROUND AND OBJECTIVE

Los Angeles is experiencing an unprecedented growth in residential construction, which is expected to continue for the next several years owing to the strong economy, low unemployment, and population growth. (Los Angeles County is projected to gain one million residents in the next two decades.)<sup>1</sup> Furthermore, the County is facing a shortfall of over half a million affordable housing units.<sup>2</sup> Given these factors and current trends toward urbanization and growth in mass transit, much of the housing demand is expected to be met by higher density, mid-rise residential structures between four and eight stories.

For structures of this size and larger, the model building code regulations have historically required the use of noncombustible building systems in order to fulfill the stated mission to "safeguard public health and safety." However, changes introduced in the 2006 model building code have allowed height limits on the use of combustible framing to leap from four stories

1. https://la.curbed.com/2017/11/6/16614390/la-county-population-increase-million

2. Report issued by the California Housing Partnership Corporation, <u>http://1p08d91kd0c03rlxhmhtydpr.wpengine.netdna-cdn.com/</u>wp-content/uploads/2017/05/Los-Angeles-County-2017.pdf

### **KEY FINDINGS**

Recent changes in the 2006 model building code have enabled the use of combustible framing material in the construction of mid-rise residential buildings in Los Angeles County. Recent history in both Los Angeles and in dozens of cities across the state and nation suggests that such framing increases the risk of fires, which has an adverse economic impact, primarily borne by the local government, businesses and residents.

Fires in mid-rise residential buildings with combustible frames could have a negative impact of \$22.6B over 15 years, including \$17.14B in direct losses from property damage.

These fires could cost the County between \$347.9M and \$410M in foregone tax revenues over 15 years. On average, fire in a mid-rise residential building constructed using combustible framing material costs the Los Angeles County a total of \$141.81 in economic impact and \$2.38 in lost tax revenues, per square foot.

The Da Vinci Apartments fire resulted in a total loss of \$245.71 per square foot, and the Renaissance at City Center fire resulted in a total loss of \$37.90 per square foot.

These two fires resulted in \$2.57 and \$2.19 in foregone County tax revenue per square foot, respectively.

Potential impact the County may face in a single year could be \$1.7 billion, including \$1.3 billion in direct property damage.

The County could lose \$28.9 million in tax revenue in one year.

or 55 feet to 70 feet tall (or up to 91 feet high built over a one- or two-story podium of noncombustible steel or concrete). A survey of the recent record of major fires in mid-rise buildings, almost all of which have been constructed with combustible framing, suggests that this new type of construction represents a higher level of risk for communities. Accompanying this risk is an adverse economic impact, primarily borne by the local government, businesses and residents.

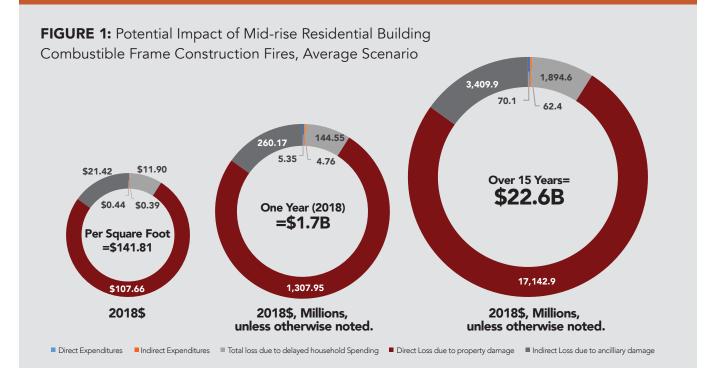
This study was conducted to determine the potential economic impact to Los Angeles County due to residential mid-rise combustible frame building fire vulnerability. The report details and estimates the direct costs and indirect impacts ranging from those associated with extinguishing the fire to productivity loss due to infrastructure damage and business disruption—by using a case study approach.

Economic impact estimates were calculated for two representative cases of fire events in mid-

rise residential buildings in Los Angeles County that used combustible framing materials, one from 2011 and the other from 2014. Those estimates were then used to project the potential total exposure for mid-rise residential construction over a fifteen-year period starting in 2014.

## **II. SUMMARY RESULTS**

In the context of an influx in the use of combustible framing in mid-rise residential buildings in Los Angeles County and a growing local and national record of related fires, this report assesses the economic vulnerability the County that this type of construction represents. This report also seeks to quantify these risks in terms of adverse impacts on government, local businesses and residents. The findings can then be used to inform the discussion on "cost of construction" in which there are many unsubstantiated claims that combustible framing systems offers a significantly cheaper alternative to noncombustible construction.





The report uses case studies to estimate the impacts per square foot and extrapolates those based on the mid-rise residential building construction activity for a fifteen-year period, starting in 2014. The two cases analyzed for this report represent the high and the low levels of impact. Overall results summarized below reflect the range (based on high and low case estimates), and a third scenario based on the average impact of the two case scenarios (high, low and average scenarios).

- From 2014 to 2017, 44,787 units were constructed in high density residential buildings, with an additional 114,983 units expected to come online by 2028.
- For these units constructed during the fifteen-year period, Los Angeles County may face:
  - over \$22.6 billion in potential exposure based on the average scenario; the range of exposure over the period is \$6 billion to \$39.1 billion (low and high scenarios).
  - up to \$378.9 million in forgone tax revenues based on the average scenario, the range being \$347.9 million to \$410 million over fifteen years.

- The potential exposure the County may face in a single year, 2018, includes:
  - over \$1.7 billion in potential total exposure based on the average scenario; the range of exposure in 2018 is \$460.5 million to \$3 billion (low and high scenarios).
  - up to \$28.9 million in forgone tax revenues based on the average scenario, the range being \$26.5 million to \$31.1 million over fifteen years.
- The total economic impact in 2018 to the County for the average scenario is \$141.81 per square foot and the County tax revenue loss per square foot is estimated to be \$2.38.
  - A fire similar in magnitude and characteristics to the case study, Da Vinci Apartment incident, will cost the County a total of \$245.71 per square foot; and \$2.57 per square foot in forgone County tax revenues, in today's dollars.
  - On the lower end of the spectrum of midrise residential building fires is the case study at The Renaissance at City Center, which cost the County a total of \$37.90 per square foot and \$2.19 per square foot in lost tax revenue, in today's dollars.

## **III. CASE STUDIES**

The goal of this study is to estimate the potential impact of damages caused by fires in mid-rise combustible material frame residential building construction in Los Angeles County. To capture the diversity of magnitude of the fires and ancillary impacts, two cases representing the range of impacts from high to low were analyzed. The cases were selected because they presented the most representative sample, and data about those events was publicly available, allowing for the production of robust estimates. The average cost and impact estimates from the samples provided an approximation of a typical fire, enabling the extrapolation of the potential exposure for the number of mid-size combustible-frame residential buildings constructed, and expected to be built, in Los Angeles from 2014 to 2028.

#### The Renaissance at City Center (Carson, CA)

On October 27, 2011, a three-alarm fire broke out at the Renaissance at City Center in Carson, CA—a 150-unit, four-story, combustible-frame apartment complex under construction. It took one hundred firefighters nearly three hours to extinguish the main fire. The building was considered a total loss. The fire destroyed five buildings and damaged an additional six, forcing an evacuation of seniors from two buildings near the property. The fire also destroyed and damaged several mobile homes at the adjacent mobile home park. Per the Los Angeles Times, fire officials said, "the large volume of combustible, coupled with the open spaces, allowed wind to blow through the structure and stoke the blaze".

#### Da Vinci Apartments (Los Angeles, CA)

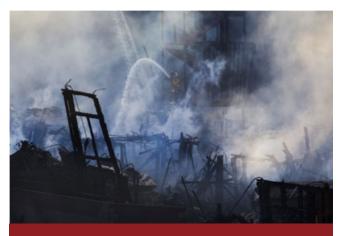
On December 8, 2014, a fire destroyed 239 apartments comprising two-thirds of a 1.3 million square foot Da Vinci apartment complex that was under construction at 909 West Temple Street in Los Angeles. The fire was put out within 90 minutes, by 250 firefighters, and crews worked for an additional 24-hours to put out flare ups and fully extinguish the deep seeded smoldering lumber. The fire also caused closure of the northbound Harbor Freeway and the northbound 101 Freeway, among the busiest in the country, for several hours and damaged at least four surrounding



Burning embers from fire at an apartment complex in Carson spread to a nearby mobile home park. Source: https:// www.nbclosangeles. com/news/



Fire: Firefighters work Dec. 8 to control a massive fire as it destroys a seven-story building under construction in downtown Los Angeles. Source: Michael Meadows/ **European Press** photo Agency). http://www.latimes. com/local/lanow/ la-me-In-la-lawsuit-davinci-fire-20160218-story. html



A firefighter hoses down hot spots after battling a massive fire at the Da Vinci apartment complex under construction in downtown Los Angeles. Source: (Patrick T. Fallon/For The Times). http:// www.latimes.com/local/lanow/la-me-In-la-lawsuitdavinci-fire-20160218-story.html

buildings, including a few owned or leased by the City Government.

## **IV. RESULTS**

The report uses case studies to estimate the impacts per square foot and extrapolates those based on the mid-rise residential building construction activity for a fifteen-year period from

2014 to 2028. The two cases analyzed for the report represent the high and the low level of impacts and extrapolation for the total potential impacts provide the upper and lower bound impact figures. The average potential impact scenario is based on the average of the high and low impact costs.

Since 2014, 44,787 residential units in high density mid-rise buildings have been constructed and 114,983 more are expected to be constructed by 2028 in the City of Los Angeles. This data was used to estimate the impact assessments calculated from the two case studies. Los Angeles County is at least two-and-a-half times larger than the City in terms of the number of households and population, which implies that our methodology that uses the City construction data, underestimates the at risk residential units and hence the total impact for the County. Despite this, the results of the analysis reveal significant and sizable vulnerability for the County.

#### Average Scenario

The potential total impact of the residential combustible frame building fires for LA County over **TABLE 1:** Potential Exposure of Fire Incidents in Mid-Size Combustible Frame Residential Buildings, 2014 to 2028: Average, Range (High, Low), Costs, Losses and Forgone Tax Revenue, Los Angeles County, NPV, 2018\$, Millions\*

	AVERAGE	HIGH	LOW
Expenditure			
Direct Expenditures**	\$70.10	\$84.10	\$56.10
Indirect Expenditures	\$62.40	\$74.90	\$49.90
Total Expenditures	\$132.50	\$159.00	\$106.10
Loss due to Property Damage			
Direct Loss due to property damage	\$17,142.90	\$31,453.6	\$2,832.2
Indirect Loss due to ancilliary damage***	\$3,409.90	\$6,511.00	\$308.80
Total Loss due to property and ancilliary damage	\$20,552.90	\$37,964.70	\$3,141.00
Loss due to Construction Delay			
Direct Household Spending loss	\$1,306.60	\$690.20	\$1,923.00
Total Output (Household Spending) loss	\$1,894.60	\$1,000.80	\$2,788.30
Total Impact**	\$22,580.00	\$39,124.5	\$6,035.50
Foregone LA County Tax Revenue due to Construct	ion Delay		
Forgone County Tax Revenue	\$378.90	\$410.00	\$347.90

\*Records the fire in the year of construction—assumes the fire incident takes place during construction. \*\*Includes City expenditures for Police and Fire departments, water usage and other governmental services. \*\*\*Includes losses due to business disruption, infrastructure damage and resident displacement

the fifteen-year period of 2014 to 2028 is \$22.6 billion, which includes the following (See Table 1):

- Potential expenditures could total \$132.5 million: \$70.1 million in direct costs of police, fire, sanitation department and other government agency employees and volunteer time, and water usage; \$62.4 million in indirect costs for fire remediation, planning, insurance costs, among others.
- The total potential loss due to property damage, \$20.5 billion, makes up for the largest share of the impact, of which nearly 85% (\$17.1 billion) is accounted for by loss due to damage and destruction of property. The remaining indirect loss of \$3.4 billion is due to the potential impact due to disruptions in business, commuter and resident activities.

**TABLE 2:** Potential Exposure of Fire Incidents in Mid-Size Combustible Frame Residential Buildings in 2018: Average, Range (High, Low), Costs, Losses and Forgone Tax Revenue, Los Angeles County, \$ Millions\*

	AVERAGE	HIGH	LOW
Expenditure			
Direct Expenditures**	\$5.35	\$6.42	\$4.28
Indirect Expenditures	\$4.76	\$5.71	\$3.81
Total Expenditures	\$10.11	\$12.13	\$8.09
Loss due to Property Damage			
Direct Loss due to property damage	\$1,307.95	\$2,399.82	\$216.09
Indirect Loss due to ancilliary damage***	\$260.17	\$496.77	\$23.56
Total Loss due to property and ancilliary damage	\$1,568.12	\$2,896.59	\$239.65
Loss due to Construction Delay			
Direct Household Spending loss	\$99.69	\$52.66	\$146.72
Total Output (Household Spending) loss	\$144.55	\$76.36	\$212.74
Total Impact**	\$1,722.78	\$2,985.08	\$460.49
Foregone LA County Tax Revenue due to Construct	ion Delay		
Forgone County Tax Revenue	\$28.91	\$31.28	\$26.55

\*Records the fire in the year of construction—assumes the fire incidents take place in 2018. \*\*Includes City expenditures for Police and Fire departments, water usage and other governmental services.

\*\*\*Includes losses due to business disruption, infrastructure damage and resident displacement

- The fires included in the study occurred during construction. The same assumption was used in generating County level total impacts. The delay in construction causes a delayed completion date and hence delayed occupancy. For the duration of the delay, Los Angeles County could lose up to \$1.9 billion in economic activity because of household local spending of the households moving into the newly constructed units for outside the County.
- Building construction delay also results in lost property and other taxes generated by a household, e.g., utility and sales taxes. The potential Los Angeles County tax revenue losses total about \$379 million over the fifteen-year period.

Table 1 above provides more detail about the high and low scenarios.

For the 12.15 million square feet of mid-rise residential construction expected in 2018, that may be vulnerable to fires, the total impact could be \$1.7 billion using per square foot costs for the average scenario. Table 2 above provides detail about the economic impact on an annual basis for 2018. Based on the average scenario:

- Total City expenditures could be up to \$10.1 million, which includes \$5.4 million in direct expenditures and \$4.8 million in indirect expenditures
- The potential loss due to property damage is estimated at \$1.6 billion, accounting for the

majority of the impact, with direct property losses accounting for \$1.3 billion.

- Loss of household spending due to delay in construction completion for new residents could add \$144.6 million to the total costs for the County.
  - The County could lose up to \$28.9 million in property and other tax revenues due to delay in construction completion.

Table 2 above provides more detail about the high and low scenarios for 2018.

**TABLE 3:** Impact of Da Vinci Apartment, Renaisance at City Center, and an Average Impact Fire, on Los Angeles County, 2018\$\*

	AVERAGE	HIGH
City Expenditure		
Direct Expenditures**	\$309	\$70
Indirect Expenditures	\$275	\$62
Total City Expenditures	\$583	\$131
Loss due to construction completion delay for LA County		
Direct Household Spending loss	\$2,532	\$2,383
Total Output (Household Spending) loss	\$3,671	\$3,456
Loss due to Property Damage for LA County		
Direct Loss due to property damage	\$115,366	\$3,510
Indirect Loss due to ancilliary damage***	\$23,881	\$383
Total Loss due to property and ancilliary damage	\$139,247	\$3,893
Total LA County Costs**	\$143,501	\$7,480
Foregone LA County tax revenue due to construction complet	ion delay	
Forgone County Tax Revenue	\$1,504	\$431

\*Da Vinci fire occurred in 2014; Renaisance at City Center fire oourred in 2011; estimates are provided in 2018\$

\*\*Includes City expenditures for Police and Fire departments, water usage and other governmental services. \*\*\*Includes losses due to business disruption, infrastructure damage and resident displacement

## **V. METHODOLOGY**

Developing projections for the total potential risk due to fire event vulnerability of the combustible frame construction of mid-size residential buildings in Los Angeles County was a two-step process. Step one: estimated impact of the two cases—Da Vinci apartments and The Renaissance at City Center. Step two: used results from step one to generate average impacts on a square foot basis and extrapolate those for the total square footage of mid-rise residential building construction data for Los Angeles City from 2014 to 2028. Consistent with the two cases, the model assumes that the fire damage would occur during construction. The only historical and projected total building construction data available from Data.lacity.org, LAEDC and Census, used in the report, was for Los Angeles City. Since the number of households and the population of the County is two-and-a-half times larger than the City, this report likely underestimates the potential vulnerability of the County.

# Assessment of economic impact for sample cases

The total cost of the fire is the collective of all expenditure on fire protection and all losses due to fire incidents. Expenditure on fire protection includes spending by the police, fire department and other government agencies, and spending on fire suppression and prevention. Losses due to property damage include direct and indirect losses. Direct losses reflect all losses to property and/or infrastructure, and indirect losses refer to impact of delay in construction completion, loss of productivity due to transportation interruption, etc. The indirect and total impacts were apportioned to Los Angeles County based on its share of the business activity in instances where such impacts were determined based on data available for a wider geography. Breakdown of the total impact is shown in Table 1.

## Los Angeles City and Los Angeles County Expenditure:

- Direct expenditure by fire, police sanitation, other government services, and volunteer time is based on the salary and benefits information in Los Angeles and the duration of the fires. It also includes the cost of water used to extinguish the fire which was informed by a methodology developed by the National Fire Academy for water usage in building fires and water cost estimates for Los Angeles.
- Indirect expenditure includes fire protection, static prevention and suppression devices, including building fire protection, fire grade products, fire maintenance, fire retardants, planning, and insurance. These costs are estimated based on the calculations used in the National Fire Protection Association (NFPA) report, "Total Cost of Fires in the United States".

#### Loss due to property damage

Includes direct and indirect losses

- Direct Property and Infrastructure loss is obtained from the National Fire Incident Reporting System and other public reports about property damage caused by fire.
- Indirect losses include impact of ancillary damages and other related losses due to building fires. Ancillary damages may result in public infrastructure interruptions or displacement of businesses and/or residents in adjacent buildings. In addition to direct losses, such events also result in loss of productivity because of disruption in transportation and other services, and the ability to work. Loss of productivity is calculated for the duration

of the disruption for all individuals impacted. Other related impact is based on methodology identified in the NFPA report.

#### Impact of construction delay

Construction periods get extended due to fire damage, delaying building completion and occupancy.

- Total Output (Household Spending) Loss is based on average household income and expenditures for the region from the Bureau of Labor Statistics, apartments destroyed in the fire, and a proportion for local spending used to calculate the potential household spending for the duration of the delay in building occupancy. The analysis accounts for the fact that only a percentage of the people moving into the newly constructed buildings would be new to the County; spending for people moving intra-County were not included. RIMS multipliers were used to calculate total output loss (direct plus indirect and induced impacts).
- In addition to the loss of economic activity due to delayed household occupancy, the County also loses tax revenues because of the extended construction period. Loss of relevant tax revenue is estimated for the duration of the delay in completion of the building using the assessment roll data for building taxes and taxes per household estimates.

#### **APPENDIX**

## CASE STUDIES

#### **DaVinci Apartments**

On December 8, 2014, a fire destroyed the <u>7-story, 526-unit, 1.3 million square foot</u> Da Vinci apartment building under construction at <u>909</u> <u>West Temple Street</u> in Los Angeles. The fire was reported at 1:20 AM, and more than <u>250</u> <u>firefighters</u> were dispatched to the site. The fire destroyed <u>at least 239</u> of the rental units and <u>2/3rds of the complex</u> burned. The fire was <u>put</u> <u>out within 90 minutes</u>, but crews worked for an additional 24-hours to put out flare ups and "fully extinguish the deep seeded smoldering lumber."

The collapse of the scaffolding and wood frame caused <u>the closure</u> of the northbound Harbor Freeway (Rt. 110) to the northbound 101 Freeway until 10AM on December 9, 2014. The freeway also remained <u>partially closed</u> after the fire, impacting about <u>500,000 commuters</u> that drove downtown to go to work. The fire <u>melted an</u> <u>exit sign</u> over the 110 freeway, and the fiber-optic cables under the freeway were damaged by intense heat.

The fire also damaged <u>at least four</u> surrounding buildings. A 15-story Los Angeles County Department of Health building (313 N. Figueroa Street) <u>suffered from radiant heat damage on</u> <u>three floors</u>. Reportedly, one window on the 1st and 5th floors <u>broke</u> and 10 windows on the 10th floor were damaged.

A 16-story high rise office building (221 N. Figueroa Street—the Lewis Brisbois, Bisgaard & Smith Building) had an <u>active fire</u> on three floors and sprinkler activation on six floors. The building was closed for business the Monday after the fire. The 221 N. Figueroa building <u>housed</u> the LA's Department of Aging, and the damage resulted in the <u>loss of 2,000 holiday gift bags</u> for seniors. In all, the 221 N. Figueroa Building saw "<u>significant damage on its 15 floors</u>" and had 300 windows blown out.

The building was <u>closed</u> following the fire. The building <u>housed</u> the LA Department of Recreation and Parks, the law firm Lewis Brisbois, the LA Department of Aging and the LA Department of Animal Services. The Parks department <u>secured</u> a 60-day lease at the Garland Building and relocated its 150 employees. Lewis Brisbois relocated its 500 employees to floors 38-45 of the US Bank Tower.

The fire also reached the LA Department of Water and Power building (111 Hope Street), which saw <u>at least 160 windows crack</u>, each of which were <u>10 feet tall</u>. The DWP building was <u>over 400</u> <u>feet</u> from the fire.

The LA Department of Building and Safety headquarters (201 N. Figueroa Street) also <u>reportedly</u> had windows blow out in the north tower and had heat and smoke that triggered sprinklers that soaked carpets and desks. The building was <u>closed</u> following the fire. Approximately 100 Bureau of Engineering workers that worked at the building were <u>also displaced</u>.

No <u>injuries or deaths</u> were reported as a result of the fire. Some residents who lived near the complex were reportedly <u>forced to evacuate</u>. Embers could reportedly be felt as far as <u>200 yards away</u>. The building's developer, Geoff Palmer, <u>said</u>, "though we have temporarily lost Building B, we will be opening Building A across the street at the end of January to those families looking forward to occupying their new home."

The fire caused an estimated \$111.5 million in damages, including <u>\$80 million</u> in damage to city properties from the fire and the water used to extinguish it (including <u>\$50 million</u> in damage to the Department of Water and Power building), <u>\$1.5 million</u> in damage to the freeway and <u>\$20-</u><u>\$30 million</u> to the apartment complex. The city recovered <u>\$61.9 million</u> from its insurance carrier following the damage. The apartment complex owner also <u>lost \$100 million</u> in lost potential revenue from the fire.

Multiple videos of the fire are available online, including <u>here</u>.

On December 18, 2014—ten days after the fire—the Los Angeles Fire Department Arson/ Counter-Terrorism Section and the National Response Team of the Bureau of Alcohol, Tobacco, Firearms and Explosives announced the fire was the result of arson. In May 2017, the Los Angeles Police Department arrested Dawud Abdulwali under suspicion of arson. In announcing the arrest, the special agent in charge of the ATF's LA field office, Carlos Canino, said the agencies spent "thousands of hours" working on the case, "running down leads, interviewing potential witnesses and performing numerous other investigative activities leading to Abdulwali's arrest." He received a 15-year prison sentence in April 2017. At the hearing, the judge said the fire "could have burned down half of Los Angeles if it had moved to other buildings."

In February 2016, LA sued developer Geoff Palmer for \$20 million for negligence, alleging Palmer <u>failed to implement</u> an appropriate fire protection plan. The complaint alleged Palmer and his company "failed to compartmentalize construction, install fire walls or doors on the property or have an appropriate water supply to fight a fire. (A law firm in one of the two city buildings also sued on similar grounds.) It also failed to provide security to prevent a person from going on the property and burning it down," according to the *Los Angeles Times*. In April 2017, the City of Los Angeles settled its \$20 million lawsuit against the Da Vinci developer Geoff Palmer. Palmer reportedly paid \$400,000 to settle the suit.

Palmer was still able to open a 526-unit apartment complex after the fire; the first phase opened in Q1 2015, and the second phase was scheduled to open in April 2016.

#### Carson Fire (21828 South Avalon Boulevard)

On October 27, 2011, a <u>three-alarm fire</u> broke out at a <u>150-unit</u>, four-story, wood-frame apartment complex under construction in Carson, CA—the Renaissance at City Center. The fire <u>began at 5:01 PM</u> at 21828 South Avalon Boulevard. Fire crews <u>arrived 3 minutes after the</u> <u>incident</u> was reported. It was <u>knocked down</u> at 7:30 PM by 100 firefighters using 40 pieces of equipment. (The <u>fire incident log</u> shows the first alarm sounded at 5:01 PM and the knockdown time as 7:34 PM.) The building was <u>considered</u> a total loss. Fire officials <u>said</u>, "the large volume of wood, coupled with the open spaces, allowed wind to blow through the structure and stoke the blaze," according to the *Los Angeles Times*.

The fire <u>destroyed</u> five buildings and damaged an additional six, according to the Los Angeles Fire Department. Senior citizens were <u>evacuated</u> from two buildings near the property, and <u>139</u> people were displaced as a result of the fire. (A December 2011 <u>report</u> said, "city public works crews worked with the developer to quickly move seniors back to their homes by the next morning. That included donating time and equipment to pump water from the building's elevator shaft.")

The fire reportedly forced residents of a nearby 139-unit mobile home park to evacuate. The mobile home park had approximately <u>300-400</u> residents, according to the Los Angeles County Sheriff's Department. The fire reportedly damaged 11 adjacent mobile homes. (Another report said 30 mobile homes were damaged or destroyed, a second report said 10 units were destroyed and 5 sustained damage and a third report from December 2011 said 6 homes at Park Avalon Mobile Estates were destroyed while some others were damaged). Some of the residents of the mobile home park spent the night in a temporary shelter at the Carson Community Center following the evacuation. One woman's home was a "total loss," according to an NBC Los Angeles report. Residents were allowed back into their homes the following day. A CBS report said the mobile home structures would be "uninhabitable [...] for the foreseeable future" because they would not have lights or electricity. Some of the displaced residents reportedly "moved into hotels while their insurance companies negotiated with the developer's insurance to rehouse them," according to a December 2011 Daily Breeze article.

Embers from the fire also <u>started a grass fire</u> near Carson High School, and embers also <u>blew</u> <u>to neighboring properties</u>, igniting grass and palm trees that the fire department had to chase down. Initial damage estimates <u>pegged</u> the fire at \$3.1 million, including \$2.5 million for the facility and \$600,000 for the mobile home park.

At the time of the fire, the project was <u>nine</u> <u>months</u> from completion.

No <u>injuries or deaths</u> were reported from the fire, and the cause of the fire was not known at the time but was ruled an accident.

A video of the fire is available <u>here</u>. Photos of the fire are available <u>here</u>.

At the time of the fire, the developer had <u>al-</u> <u>ready begun selling</u> apartments. In December 2011, the developers, including Thomas Safran & Associates, said they worked with their insurance company and contractors to <u>begin rebuilding</u> the luxury housing development. The project manager said the developer would demolish half of the wood-frame damaged by the fire/smoke, test the foundation and then rebuild to finish construction by early 2013. The facility, located at 2800 South Avalon Boulevard, opened in <u>2013</u>.

In October 2014, the City of Carson was <u>asked to</u> <u>enter</u> into a PSA with Carson Christian Outreach and School to purchase the 0.23-acre property at 21828 Avalon Boulevard for \$911,000. The Mayor asked to purchase the site for future development into a park. The agenda item for the Carson City Council noted the site was "surrounded by, a senior and family housing development directly to the north, a mobile home park to the east, and a senior housing community less than a quarter mile away on 220th Street."

#### Residents Survey Damage After Carson Fire

"You could feel the heat from the flames just bursting in" By Jonathan Lloyd, Andy Adler and Antonio Castelan Published at 6:32 AM PDT on Oct 28, 2011 | Updated at 7:46 PM PDT on Oct 28, 2011

The fire that destroyed at least six buildings and displaced more than a hundred people in Carson has been ruled accidental. (Published Friday, Oct. 28, 2011)

Some residents of a Carson mobile home park were allowed to inspect their homes Friday, a day after a fire at a nearby construction site spread through the neighborhood and prompted evacuations.

"I feel lucky, really lucky," said resident Virginia Cortez, who was escorted by a sheriff's deputy to her home, which was not damaged. "I'm going to get my medicines and some clothes... because I don't know when we're going to come inside again."

The fire damaged about 11 homes was ruled accidental. No injuries were reported.

Some residents spent the night in a shelter after the 139-unit park was evacuated.

#### Massive Fire Forces Residents from Mobile Park [LA]

Burning embers from a massive fire at an apartment complex in Carson spread to a nearby mobile home park.(Published Friday, Oct. 28, 2011)

"I had no jacket, nothing," said resident Amy German. "I came here with my ID, but no clothes."

Don Goodheart's home is a total loss. He spent Friday sorting through his belongings, salvaging what he could. "Mostly clothes, that's the only thing we are salvaging," Goodheart said.

#### Residents Survey Damage After Carson Fire[LA]

Some residents returned to their mobile home park Friday to discover their homes were a total loss.(Published Friday, Oct. 28, 2011)

On Friday, Angeles Mercado was still in the pajamas he was wearing the day before, as he and his wife ran from the fire.

"This is the worst kind of thing," Mercado said. "I am 89 years old. This is the worst."

Crews have not determined the cause of the fire, which began at about 5 p.m. in the 21000 block of South Avalon Boulevard. The wood frame structure burned quickly, and winds carried embers to the mobile home park.

#### Carson Apartment Complex Fire[LA]

A 3-alarm fire destroys an apartment complex under construction in Carson. Beverly White spoke with residents who watched the whole thing happen(Published Friday, Oct. 28, 2011)

Some flames were 100 feet high, said Mark Savage of the Los Angeles County Fire Department.

"I looked out on my front porch and the fire was shooting up really, really high," a resident told NBC4. "I could feel the heat on my face."

Embers started a grass fire near Carson High School.

Top News Photos: Los Angeles

"You could feel the heat from the flames just bursting in," said a woman who was in a nearby hair salon during the fire. "You could actually feel it from the glass on the inside."

The fire was knocked down at about 7:30 p.m. One hundred firefighters using 40 pieces of equipment responded.

Damage was estimated at \$3.1 million—\$2.5 million for the senior living center and \$600,000 for the mobile home park. The Renaissance Apartment Development project was about nine months from completion.

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## **APPENDIX: DATA TABLES AND SOURCES**

#### Employment and Establishment Data, California State

Quarterly Census of Employment and Wages

Area: California – Statewide Industry: Total, all industries Owner: Private

Size: All establishment sizes

Type: All Employees

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2007	12902497	12980875	13086241	13105480	13244992	13339543	13317120	13353745	13337829	13302701	13298809	13330899	13216728
2008	12896896	12965324	13009731	13070670	13183319	13220780	13142064	13146701	13120799	13007769	12883988	12823472	13039293
2009	12359874	12264714	12225672	12188620	12296958	12300887	12173808	12178123	12159835	12138919	12101190	12084869	12206122
2010	11743708	11765984	11811377	11935706	12064977	12154751	12120079	12169186	12163799	12212727	12197572	12195501	12044614
2011	11922145	11987952	12006806	12150127	12274672	12327372	12341558	12403259	12431075	12440197	12461053	12439626	12265487
2012	12263667	12330076	12396246	12479363	12668360	12786544	12777666	12847367	12856763	12912218	12947732	12947150	12684429
2013	12669230	12764966	12829606	12959447	13096509	13160344	13196377	13276459	13260235	13315777	13367655	13358530	13104595
2014	13089550	13163023	13225832	13363334	13496554	13545086	13568945	13678811	13669619	13715249	13753209	13751314	13501711
2015	13468411	13548857	13621962	13752802	13875181	13924517	14054045	14112896	14091508	14174971	14188956	14183917	13916502
2016	13914002	14007676	13992792	14223412	14299040	14300544	14406028	14445762	14436973	14479494	14494664	14459910	14288358
2017	139125(P)	242435(P)	312373(P)	450154(P)	582757(P)	657193(P)	675492(P)	·725617(P)	·703433(P)				

Area: California -- Statewide

Industry: Total, all industries

Owner: Private

Size: All establishment sizes

Type:	Type: Number of Establishments									
Year	Qtr1 Qtr2 Qtr3		Qtr3	Qtr4	Annual					
2007	1222196	1247239	1271726	1301422	1260646					
2008	1255662	1281834	1305092	1331311	1293475					
2009	1277371	1295331	1315360	1335954	1306004					
2010	1267235	1285165	1309775	1336841	1299754					
2011	1308392	1330914	1356137	1376886	1343082					
2012	1239579	1382139	1280377	1296693	1299697					
2013	1259472	1291820	1303961	1328631	1295971					
2014	1330908	1320863	1338891	1362505	1338292					
2015	1354390	1368824	1387660	1413282	1381039					
2016	1406014	1422416	1445110	1467915	1435364					
2017	459709(P)	478305(P)	.498646(P)							

Source: BLS

#### Employment and Establishment Data, Los Angeles County

 Area:
 Los Angeles County, California

 Industry:
 Total, all industries

 Owner:
 Private

 Size:
 All establishment sizes

 Type:
 All Employees

Type.	All Employ	663											
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2007	3558908	3590642	3613153	3594359	3611174	3626017	3604479	3615840	3624077	3645107	3660646	3688297	3619392
2008	3550626	3580546	3601237	3597233	3602944	3602383	3579553	3575360	3580693	3570155	3551771	3549502	3578500
2009	3409598	3399700	3394042	3354327	3355294	3348269	3304008	3301926	3313159	3323007	3330960	3345784	3348340
2010	3243194	3252779	3267191	3274591	3282748	3292647	3288870	3299073	3305818	3322284	3334733	3358487	3293535
2011	3285209	3304763	3314574	3326328	3334957	3335419	3327755	3338922	3351880	3368169	3387637	3404492	3340009
2012	3355689	3380798	3399332	3416276	3430621	3442975	3437198	3452361	3457387	3494240	3528161	3548549	3445299
2013	3464419	3485412	3500012	3512226	3523248	3532845	3548106	3564685	3572288	3594180	3630316	3641197	3547411
2014	3560810	3574687	3585084	3598146	3610224	3614329	3608365	3636120	3639589	3660172	3686043	3699212	3622732
2015	3604154	3632506	3644311	3658222	3668862	3678366	3697453	3708559	3713818	3759884	3780594	3790341	3694756
2016	3718990	3747184	3740046	3780489	3786548	3770311	3779332	3791074	3792535	3808881	3832091	3839082	3782214
2017	738743(P)	772357(P)	771284(P)	795331(P)	806354(P)	812853(P)	819391(P)	832231(P)	839785(P)				

Area: Los Angeles County, California

Industry: Total, all industries

Owner: Private

Size: All establishment sizes

Type: Number of Establishments

Year	Qtr1	Qtr2	Qtr3	Qtr4	Annual
2007	378842	388074	395056	412380	393588
2008	402327	414597	422730	428426	417020
2009	408826	412975	416826	430634	417315
2010	403600	414490	420452	430784	417332
2011	422339	424746	433026	440347	430115
2012	389869	442174	402855	413947	412211
2013	400526	414133	423453	431166	417320
2014	432816	428247	432734	439572	433342
2015	437144	442630	447736	456388	445975
2016	453229	457018	462265	464092	459151
2017	463800(P)	475023(P)	481830(P)		

#### Los Angeles County and City Tax Revenues

LOS ANGELES COUNTY TAX R	EVENUE, 2014
Property Taxes	\$5,533,336,000
Utility Tax	\$61,135,000
Voter Approved Tax	\$361,662,000
Document Transfer Tax	\$79,938,000
Other Taxes	\$30,346,000
Total Tax Revenue	\$6,066,417,000
# Households	3,462,075

Source: County of Los Angeles, Budget

2013–2014 LOS ANGELES CITY REVENUES	
Property Taxes (Includes Bond Redemption and Interest)	1,767,667,141
Allocations from Other Governmental Agencies (Subvention and Grants)	568,727,689
Utility Users' Tax	637,897,273
Business and Transient Occupancy Taxes	645,582,782
Licenses, Permits, and Fees (except proprietary transfers)	753,179,912
Other Fees, Fines and Taxes	1,091,342,322
Sales Tax	353,533,428
Proprietary Departments	435,445,049
Sewer Revenue	699,381,347
Miscelaneous	714,752,366
Total Revenue	7,685,509,310
Total Tax Revenue	4,496,022,946

Source: City of Los Angeles, Budget

#### Income and Benefits Data, Los Angeles County

	Los Angeles County, California					
Subject	Estimate	Margin of Error	Percent	Percent Margin of Erro		
INCOME AND BENEFITS (IN 201	6 INFLATIO	ON-ADJUST	ED DOLLAI	RS)		
Total households	3,281,845	+/-5,067	3,281,845	(X)		
Less than \$10,000	212,577	+/-2,886	6.50%	+/-0.1		
\$10,000 to \$14,999	185,054	+/-2,942	5.60%	+/-0.1		
\$15,000 to \$24,999	335,003	+/-3.845	10.20%	+/-0.1		
\$25,000 to \$34,999	305.605	+/-2.959	9.30%	+/-0.1		
\$35,000 to \$49,999	406,591	+/-4,163	12.40%	+/-0.1		
\$50,000 to \$74,999	540,185	+/-4,174	16.50%	+/-0.1		
\$75,000 to \$99,999	382,147	+/-4.060	11.60%	+/-0.1		
\$100,000 to \$149,999	458,448	+/-4.595	14.00%	+/-0.1		
\$150,000 to \$199,999	205.799	+/-2.319	6.30%	+/-0.1		
\$200,000 or more	250,436	+/-3,308	7.60%	+/-0.1		
Median household income (dollars)	57.952	+/-331	(X)	(X)		
Mean household income (dollars)	85.514	+/-417	(X)	(X)		
W/A						
With earnings	2,702,744	+/-6.016	82.40%	+/-0.1		
Mean earnings (dollars)	85,998	+/-425	(X)	(X)		
With Social Security Mean Social Security income (dollars)	793,658	+/-3.949	24.20%	+/-0.1		
With retirement income	16.717	+/-80	(X)	(X)		
Mean retirement income (dollars)	397.443	+/-4.152	12.10%	+/-0.1		
Wrean retirement income (donars)	29,171	+/-333	(X)	(X)		
With Supplemental Security Income	226,098	+/-2.851	6.90%	+/-0.1		
Mean Supplemental Security Income (dollars)	9.707	+/-60	(X)	(X)		
With cash public assistance income	129,686	+/-2,044	4.00%	+/-0.1		
Mean cash public assistance income (dollars)	4,660	+/-63	(X)	(X)		
With Food Stamp/SNAP benefits in the past 12 months	296,193	+/-3,178	9.00%	+/-0.1		
Families	0 400 470		0.400.470			
Less than \$10,000	2,196,172	+/-7,449	2,196,172	(X)		
\$10,000 to \$14,999	102,560	+/-1.867	4.70%	+/-0.1		
\$15,000 to \$24,999	79,477	+/-1.924	3.60%	+/-0.1		
\$25,000 to \$34,999	211.451	+/-3.027 +/-2,585	9.60% 9.10%	+/-0.1		
\$35,000 to \$49,999	200,493 275,901	+/-2,383	12.60%	+/-0.1		
\$50,000 to \$74,999	361.861	+/-3,409	16.50%	+/-0.2		
\$75,000 to \$99,999	267,399	+/-3.328	12.20%	+/-0.1		
\$100,000 to \$149,999	338,466	+/-3.714	15.40%	+/-0.1		
\$150,000 to \$199,999	160,279	+/-2,155	7.30%	+/-0.2		
\$200,000 or more	198,285	+/-3,227	9.00%	+/-0.1		
Median family income (dollars)	64,824	+/-359	(X)	(X)		
Mean family income (dollars)	94.396	+/-530	(X) (X)	(X) (X)		
<b>75 1 1 2 1 11 5</b>						
Per capita income (dollars)	29,301	+/-148	(X)	(X)		
Nonfamily households	1,085,673	+/-5.359	1.085.673	(X)		
Median nonfamily income (dollars)	40.949	+/-278	(X)	(X)		
Mean nonfamily income (dollars)	62,419	+/-515	(X)	(X)		
Madian againing for work or (dollars)	00.470	. / 00				
Median earnings for workers (dollars) Median earnings for male full-time, year-round	30,176	+/-80	(X)	(X)		
workers (dollars)	43,693	+/-435	(X)	(X)		
Median earnings for female full-time, year- round workers (dollars)	40,802	+/-157	(X)	(X		

Source: U.S. Census

#### Unemployment Data, LA County

Year	Period	Label	Unemployment Rate (in %)	Employment	Labor Force	Unemployment
2014	M01	2014 Jan	9.1	4,516,670	4,967,282	450.612
2014	M02	2014 Feb	8.8	4,554,646	4,995,044	440,398
2014	M03	2014 Mar	8.6	4,575,054	5,006,687	431,633
2014	M04	2014 Apr	7.9	4,581,781	4,972,258	390,477
2014	M05	2014 May	8.1	4.580.572	4.983.341	402.769
2014	M06	2014 Jun	8.3	4,572,704	4,985,460	412,756
2014	M07	2014 Jul	9.0	4,575,067	5.028.104	453.037
2014	M08	2014 Aug	8.6	4,587,934	5.020.069	432,135
2014	M09	2014 Sep	8.0	4.620.448	5.023.682	403.234
2014	M10	2014 Oct	7.8	4,642,164	5.034.516	392,352
2014	M11	2014 Nov	7.7	4,646,357	5.031.840	385,483
2014	M12	2014 Dec	7.2	4,639,424	5.000.765	361,341
2015	M01	2015 Jan	7.9	4.608,712	5.002.111	393.399
2015	M02	2015 Feb	7.4	4,654,551	5,024,451	369,900
2015	M03	2015 Mar	7.0	4,657,340	5.010.328	352,988
2015	M04	2015 Apr	6.7	4.673.345	5.007.549	334,204
2015	M05	2015 May	6.8	4.672.529	5.013.916	341.387
2015	M06	2015 Jun	6.8	4,647,851	4,987,613	339,762
2015	M07	2015 Jul	7.2	4,654,872	5,014,410	359,538
2015	M08	2015 Aug	6.6	4,656,862	4,985,753	328,891
2015	M09	2015 Sep	6.1	4,675,108	4.978.869	303.761
2015	M10	2015 Oct	5.9	4.705.661	4.999.423	293.762
2015	M10 M11	2015 Oct 2015 Nov	5.7	4,719,908	5,004,229	284,321
2015	M12	2015 Dec	5.5	4,726,432	4,999,326	272,894
2015	M01	2015 Dec 2016 Jan	5.8	4,714,059	5.002.054	287,995
2016	M02	2016 Jan 2016 Feb	5.4	4.771.427	5.045.101	273.674
2016	M03	2016 Mar	5.3	4,777,635	5,043,520	265,885
2016	M04	2016 Apr	5.0	4,771,892	5.043.820	251,928
P	M05		4.8	• • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·	
2016		2016 May		4,790,381	5.034.414	244,033
2016	M06	2016 Jun	5.3	4.760.973	5.029.896	268.923
2016	M07	2016 Jul	5.8	4,782,178	5.077.668	295,490
2016	M08	2016 Aug	5.6	4,784,029	5,066,165	282,136
2016	M09	2016 Sep	5.3	4.811.645	5.080.457	268.812
2016	M10	2016 Oct	5.1	4.821.287	5.082.348	261.061
2016	M11	2016 Nov	4.8	4.835.979	5.080.907	244,928
2016	M12	2016 Dec	4.7	4,832,571	5,072,907	240,336
2017	M01	2017 Jan	5.2	4.802.821	5.066.895	264.074
2017	M02	2017 Feb	5.0	4.861.294	5.114.881	253.587
2017	M03	2017 Mar	4.7	4,876,046	5,115,208	239,162
2017	M04	2017 Apr	4.4	4,879,789	5,106,537	226,748
2017	M05	2017 May	4.4	4,866,683	5,092,293	225.610
2017	M06	2017 Jun	4.8	4.856.626	5,101,231	244.605
2017	M07	2017 Jul	5.3	4,879,558	5,152,986	273,428
2017	M08	2017 Aug	5.1	4.875.390	5,137,893	262,503
2017	M09	2017 Sep	4.6	4,934,660	5,171,660	237,000
2017	M10	2017 Oct	4.4	4.922.026	5.146.520	224,494
2017	M11	2017 Nov	4.3	4,929,929	5,151,157	221,228
2017	M12	2017 Dec	4.1	4,918,856	5,129,929	211,073
2018	M01	2018 Jan	4.7	4,875,377	5,118,030	242,653

Source: BLS

#### Housing Characteristics, Los Angeles County

			Los Angeles	County, CA		
Subject	Occupied h	ousing units		pied housing its	Renter-occu ui	ipied housing iits
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Occupied housing units Average household size	3.281.845	+/-5.067	1.499.576	+/-10.095	1.782.269	+/-7.413
Average nousenoid size	2.98	+/-0.1 HOUSEHO	3.19 DLD SIZE	+/-0.1	2.86	+/-0.1
1-person household	25.60%	+/-0.2	19.20%	+/-0.2	31.10%	+/-0.2
2-person household	27.60%	+/-0.1	30.00%	+/-0.2	25.60%	+/-0.2
3-person household	16.80%	+/-0.1	17.90%	+/-0.2	15.80%	+/-0.2
4-or-more-person	30.00%	+/-0.1	32.80%	+/-0.2	27.50%	+/-0.2
household		DCCUPANTS			21.0070	17 0.2
1.00 or less occupants per	C	JCCUPANIS	PER ROOM			
room 1.01 to 1.50 occupants per	88.20%	+/-0.1	94.30%	+/-0.1	83.10%	+/-0.2
room	7.00%	+/-0.1	4.20%	+/-0.1	9.30%	+/-0.2
1.51 or more occupants per room	4.80%	+/-0.1	1.50%	+/-0.1	7.50%	+/-0.1
HOUSEHOLD TY	PE (INCLUD	ING LIVING	GALONE) AN	ND AGE OF	HOUSEHOL	DER
Family households	66.90%	+/-0.2	76.60%	+/-0.2	58.80%	+/-0.2
Married-couple family	44.60%	+/-0.2	59.10%	+/-0.3	32.50%	+/-0.3
Householder 15 to 34	5.70%	+/-0.1	3.50%	+/-0.1	7.60%	+/-0.1
years	5.10/5	., 0.1	0.0070			., 0.1
Householder 35 to 64 years	30.70%	+/-0.2	41.40%	+/-0.3	21.60%	+/-0.2
Householder 65 years and over	8.20%	+/-0.1	14.10%	+/-0.1	3.30%	+/-0.1
Other family	22.30%	+/-0.2	17.50%	+/-0.2	26.30%	+/-0.2
Male householder, no wife present	6.80%	+/-0.1	5.70%	+/-0.1	7.80%	+/-0.1
Householder 15 to 34 years	1.90%	+/-0.1	0.90%	+/-0.1	2.80%	+/-0.1
Householder 35 to 64 years	4.10%	+/-0.1	3.60%	+/-0.1	4.50%	+/-0.1
Householder 65 years and over	0.80%	+/-0.1	1.20%	+/-0.1	0.40%	+/-0.1
Female householder, no husband present	15.40%	+/-0.1	11.80%	+/-0.2	18.50%	+/-0.2
Householder 15 to 34 years	3.10%	+/-0.1	0.90%	+/-0.1	5.00%	+/-0.1
Householder 35 to 64 years	9.90%	+/-0.1	7.20%	+/-0.1	12.10%	+/-0.1
Householder 65 years and over	2.50%	+/-0.1	3.70%	+/-0.1	1.40%	+/-0.1
Nonfamily households Householder living alone	33.10% 25.60%	+/-0.2 +/-0.2	23.40% 19.20%	+/-0.2 +/-0.2	41.20% 31.10%	+/-0.2 +/-0.2
Householder 15 to 34						
years	4.80%	+/-0.1	1.10%	+/-0.1	8.00%	+/-0.1
Householder 35 to 64 years	12.50%	+/-0.1	8.80%	+/-0.1	15.60%	+/-0.2
Householder 65 years and over	8.40%	+/-0.1	9.40%	+/-0.1	7.50%	+/-0.1
Householder not living alone	7.40%	+/-0.1	4.20%	+/-0.1	10.10%	+/-0.1
Householder 15 to 34 years	3.60%	+/-0.1	0.70%	+/-0.1	6.00%	+/-0.1
Householder 35 to 64 years	3.10%	+/-0.1	2.50%	+/-0.1	3.60%	+/-0.1
Householder 65 years and over	0.80%	+/-0.1	1.10%	+/-0.1	0.60%	+/-0.1
	MILY TYPE	AND PRESE	NCE OF OW	N CHILDRE	EN	
With related children of householder under 18	34.30%	+/-0.2	33.10%	+/-0.3	35.30%	+/-0.2
years With own children of householder under 18 years	30.00%	+/-0.2	27.80%	+/-0.3	31.90%	+/-0.2
Under 6 years only	5.90%	+/-0.1	4.80%	+/-0.1	6.80%	+/-0.1
Under 6 years and 6 to 17						
years	6.10%	+/-0.1	4.50%	+/-0.1	7.40%	+/-0.1
6 to 17 years only	18.10%	+/-0.1	18.50%	+/-0.2	17.70%	+/-0.2
No own children of householder under 18	4.30%	+/-0.1	5.30%	+/-0.1	3.40%	+/-0.1
years No related children of householder under 18 years	65.70%	+/-0.2	66.90%	+/-0.3	64.70%	

Source: U.S. Census

2014 LA County		Calif	ornia		Los	Angeles Co	ounty, Calif	fornia
				Percent				Percent
Subject	Es tim ate	Margin of Error	Percent	Margin of Error	Estimate	Margin of Error	Percent	Margin of Error
HOUSING OCCUPANCY								
Total housing units	13,781,929	+/-1,283	13,781,929	(X)		+/-1,291	3,462,075	(X
Occupied housing units	12,617,280	+/-20,413	91.50%	+/-0.1	3,242,391	+/-5,245	93.70%	+/-0.1
Vacant housing units	1,164,649	+/-19,612	8.50%	+/-0.1	219,684	+/-4,955	6.30%	+/-0.
Homeowner vacancy rate	1.6	+/-0.1	(X)	(X)	1.4	+/-0.1	(X)	(X
Rental vacancy rate	4.6	+/-0.1	(X)	(X)	4.1	+/-0.1	(X)	(X
UNITS IN STRUCTURE								
Total housing units	13,781,929		13,781,929	• • •	3,462,075		3,462,075	(X
1-unit, detached	8,017,091	+/-12,318	58.20%	+/-0.1		+/-4,640	49.70%	+/-0.
1-unit, attached 2 units	960,230 349,481	+/-7,548 +/-4,238	7.00%	+/-0.1	226,435 85,702	+/-2,876	6.50% 2.50%	+/-0.
3 or 4 units	763,015	+/-4,238	2.50%	+/-0.1	194,399	+/-2,076		+/-0.
5 to 9 units	844,044	+/-7,386	6.10%	+/-0.1	270,303	+/-3,168	7.80%	+/-0.
10 to 19 units	725,781	+/-6,238	5.30%	+/-0.1	267,561	+/-2,785	7.70%	+/-0.
20 or more units	1,587,894	+/-7,056	11.50%	+/-0.1	642,690	+/-3,600	18.60%	+/-0.
Mobile home	518,547	+/-3,943	3.80%	+/-0.1	52,995	+/-1,255	1.50%	+/-0.
Boat, RV, van, etc.	15,846	+/-911	0.10%	+/-0.1	1,958	+/-343	0.10%	+/-0.
YEAR STRUCTURE BUILT	40 704 007		40 70 4 05 7		0 400 07-	11.1.05 -	0 400 07-	
Total housing units	13,781,929		13,781,929		3,462,075		3,462,075	()
Built 2010 or later Built 2000 to 2009	86,387	+/-2,023	0.60%	+/-0.1	15,161 210,874	+/-721 +/-2,904	0.40%	+/-0.
Built 2000 to 2009 Built 1990 to 1999	1,649,540	+/-8,716 +/-6,391	12.00% 10.70%	+/-0.1	210,874 217,222	+/-2,904	6.10%	+/-0.
Built 1980 to 1989	2,109,495		15.30%	+/-0.1	404,410	+/-3,624	11.70%	+/-0.
Built 1970 to 1979	2,109,495	+/-8,290	18.20%	+/-0.1	404,410	+/-3,624	14.00%	+/-0.
Built 1960 to 1969	1,875,711	+/-8,149	13.60%	+/-0.1	514,580	+/-3,977	14.90%	+/-0.
Built 1950 to 1959	1,907,537	+/-7,389	13.80%	+/-0.1	714,467	+/-5,054	20.60%	+/-0.
Built 1940 to 1949	873,498	+/-5,725	6.30%	+/-0.1	379,320	+/-4,103	11.00%	+/-0.
Built 1939 or earlier	1,296,802	+/-6,183	9.40%	+/-0.1	522,492	+/-4,292	15.10%	+/-0.
ROOMS								
Total housing units	13,781,929	,	13,781,929		3,462,075		3,462,075	()
1 room	430,858	+/-5,193	3.10%	+/-0.1	185,673	+/-2,521	5.40%	+/-0.
2 rooms	541,685		3.90%	+/-0.1	188,980	+/-3,165		+/-0.
3 rooms	1,660,132	+/-8,082	12.00%	+/-0.1	575,037	+/-4,270	16.60%	+/-0.
4 rooms	2,652,059		19.20%	+/-0.1	728,223	+/-4,627	21.00%	+/-0.
5 rooms 6 rooms	2,833,097 2,341,530	+/-11,314 +/-10,462	20.60% 17.00%	+/-0.1	654,938 495,900	+/-4,985 +/-4,457	18.90% 14.30%	+/-0.
7 rooms	1.524.919	+/-7,474	11.10%	+/-0.1	298,047	+/-4,457	8.60%	+/-0.
8 rooms	906,872	+/-6.037	6.60%	+/-0.1	169,699	+/-2,122	4.90%	+/-0.
9 rooms or more	890,777	+/-7,135	6.50%	+/-0.1	165,578	+/-2,544	4.80%	+/-0.
Median rooms	5.1	+/-0.1	(X)	(X)	4.6	+/-0.1	(X)	()
BEDROOMS								
Total housing units	13,781,929	+/-1,283	13,781,929	(X)	3,462,075	+/-1,291	3,462,075	()
No bedroom	490,846		3.60%	+/-0.1	209,967	+/-2,679		+/-0.
1 bedroom	1,945,111	+/-8,226	14.10%	+/-0.1	697,461	+/-5,336	20.10%	+/-0.
2 bedrooms	3,860,385		28.00%		1,048,437	+/-5,903		+/-0.
3 bedrooms	4,611,065	+/-10,754	33.50% 16.50%	+/-0.1	976,911	+/-4,064	28.20%	+/-0.
4 bedrooms 5 or more bedrooms	2,280,896	+/-9,313	4.30%	+/-0.1	412,919 116,380	+/-3,225	11.90% 3.40%	+/-0.
	333,020	17-4,030	4.5070	1/-0.1	110,000	17-1,301	3.4070	17=0.
HOUSING TENURE								
Occupied housing units	12,617,280	+/-20 413	12,617,280	(X)	3,242,391	+/-5 245	3,242,391	()
Owner-occupied	6,908,925		54.80%		1,503,915	+/-8.684	46 40%	+/-0.
Renter-occupied	5,708,355		54.80% 45.20%		1,503,915	.,		+/-0.
	, 20,000	,027	1212070	. 0.2	,,	. 2,001		., 0.
Average household size of owner-	2.99	+/-0.01	(X)	(X)	3.2	+/-0.01	(X)	()
occupied unit Average household size of renter-								
occupied unit	2.91	+/-0.01	(X)	(X)	2.87	+/-0.01	(X)	()
YEAR HOUSEHOLDER MOVED INTO UNIT								
Occupied housing units	12,617,280	+/-20,413	12,617,280	(X)	3,242,391	+/-5,245	3,242,391	()
Moved in 2010 or later	3,487,014	+/-13,379	27.60%	+/-0.1	866,581	+/-5,293	26.70%	+/-0.
Moved in 2000 to 2009	5,159,736	+/-14,585	40.90%	+/-0.1	1,281,776	+/-6,290	39.50%	+/-0.
Moved in 1990 to 1999	2,023,579	+/-11,136	16.00%	+/-0.1	554,776	+/-4,673	17.10%	+/-0.
Moved in 1980 to 1989	959,729		7.60%	+/-0.1	249,765	+/-3,078		+/-0.
Moved in 1970 to 1979	604,352	+/-5,164	4.80%	+/-0.1	170,065	+/-2,600	5.20%	+/-0.
Moved in 1969 or earlier	382,870	+/-3,693	3.00%	+/-0.1	119,428	+/-1,899	3.70%	+/-0.
SELECTED CHARACTERISTICS								
Occupied housing units	12,617,280	+/-20,413	12,617,280	(X)	3,242,391	+/-5,245	3,242,391	()
	61,136		0.50%	+/-0.1	16,349	+/-984	0.50%	+/-0.
Lacking complete numbing facilities	1 31,130	2,00/	0.00 %					
Lacking complete plumbing facilities	454 30-	110	4 00011					
Lacking complete kitchen facilities	151,727		1.20%	+/-0.1	51,413			
	151,727 259,713		1.20% 2.10%	+/-0.1 +/-0.1	51,413 68,711	+/-1,308 +/-1,816		+/-0. +/-0.

		Calif	ornia		Los	Angeles Co	ounty, Califo	
	Estimate	Margin of	Percent	Percent Margin of Error	Estimate	Margin of	Percent	Percent Margin of Error
Subject SEX AND AGE	Estimate	Error	Percent	Error	Estimate	Error	Percent	Error
Total population	38,066,920		38,066,920	(X)	9,974,203		9,974,203	(X)
Male Female	18,911,519 19,155,401	+/-903	49.70% 50.30%	+/-0.1	4,913,688 5,060,515		49.30% 50.70%	
remaie	18,133,401	17-303	30.30 %	17-0.1	3,000,313		30.70%	
Under 5 years	2,521,299	+/-531	6.60%	+/-0.1	644,638		6.50%	
5 to 9 years 10 to 14 years	2,531,195 2,552,173	+/-8,349 +/-8,409	6.60% 6.70%	+/-0.1	629,141 651,107	+/-3,382 +/-3,381	6.30% 6.50%	+/-0.1
15 to 19 years	2,709,174	+/-1,118	7.10%	+/-0.1	714,751	•••••	7.20%	
20 to 24 years	2,887,213	+/-1,227	7.60%	+/-0.1	776,820		7.80%	
25 to 34 years 35 to 44 years	5,513,196 5,175,688	+/-1,065	14.50% 13.60%	+/-0.1	1,522,133		15.30% 14.20%	
45 to 54 years	5,248,476	+/-912	13.80%	+/-0.1	1,379,750		13.80%	
55 to 59 years	2,327,383	+/-7,271	6.10%	+/-0.1	596,246	+/-3,432	6.00%	+/-0.1
60 to 64 years 65 to 74 years	1,983,216 2,553,063	+/-7,204 +/-663	5.20% 6.70%	+/-0.1	490,329 628,108	+/-3,431	4.90%	+/-0.1
75 to 84 years	1,417,512	+/-4,599	3.70%	+/-0.1	356,889	+/-2,126	3.60%	+/-0.1
85 years and over	647,332	+/-4,652	1.70%	+/-0.1	164,896	+/-2,127	1.70%	+/-0.1
Median age (years)	35.6	+/-0.1	(X)	(X)	35.3	+/-0.1	(X)	(X)
wedian age (years)	35.0	7/-0.1	(A)	(^)	30.3	7/-0.1	(A)	(^)
18 years and over	28,854,632	+/-394	75.80%	+/-0.1	7,626,603		76.50%	
21 years and over 62 years and over	27,145,028 5,755,448	+/-6,479 +/-4,764	71.30% 15.10%	+/-0.1	7,175,857	+/-2,711 +/-2,814	71.90% 14.30%	+/-0.1
65 years and over	4,617,907	+/-557	12.10%	+/-0.1	1,149,893	*****	11.50%	
18 years and over	28,854,632	+/-394	28,854,632	(X)	7,626,603		7,626,603	(X)
Male Female	14,202,752 14,651,880	+/-616 +/-512	49.20% 50.80%	+/-0.1	3,714,170 3,912,433		48.70% 51.30%	
	,007,000	.,=012	55.00 /6		-,-,-,-,-,00		01.00%	
65 years and over	4,617,907	+/-557	4,617,907	(X)	1,149,893		1,149,893	(X)
Male Female	2,026,406 2,591,501	+/-471 +/-366	43.90% 56.10%	+/-0.1	492,621 657,272		42.80% 57.20%	
	2,001,001	*/-300	50.10%	17-0.1	531,212		57.20%	
RACE								
Total population	38,066,920 36,368,747		38,066,920	(X)	9,974,203		9,974,203	(X)
One race Two or more races	36,368,747	+/-22,403	95.50% 4.50%	+/-0.1	9,586,358 387,845	+/-6,956 +/-6,956	96.10% 3.90%	+/-0.1
One race	36,368,747	+/-22,403	95.50%	+/-0.1	9,586,358	+/-6,956	96.10%	+/-0.1
White Black or African American	23,650,913 2,262,323	+/-27,619 +/-6,283	62.10% 5.90%	+/-0.1	5,329,333 832,253	+/-18,640 +/-3,423	53.40% 8.30%	+/-0.2
American Indian and Alaska Native	287,360	+/-6,860	0.80%	+/-0.1	54,409	+/-2,688	0.50%	+/-0.1
Cherokee tribal grouping	22,525	+/-1,387	0.10%	+/-0.1	2,682	+/-483	0.00%	+/-0.1
Chippewa tribal grouping	2,544	+/-438 +/-856	0.00%	+/-0.1	501 1.891	+/-241	0.00%	+/-0.1
Navajo tribal grouping Sioux tribal grouping	4,872	+/-856	0.00%	+/-0.1	1,891	+/-406	0.00%	+/-0.1
Asian	5,130,536	+/-7,902	13.50%	+/-0.1	1,394,349	+/-3,826	14.00%	+/-0.1
Asian Indian	595,717	+/-11,021	1.60%	+/-0.1	82,296	+/-3,250	0.80%	+/-0.1
Chinese Filipino	1,353,021	+/-10,394	3.60%	+/-0.1	421,665 326,703	+/-5,569 +/-5,442	4.20%	+/-0.1
Japanese	277,802	+/-5,526	0.70%	+/-0.1	101,189	+/-2,896	1.00%	+/-0.1
Korean	461,748	+/-6,512	1.20%	+/-0.1	217,260	+/-4,702	2.20%	+/-0.1
Vietnamese Other Asian	622,385 597.614	+/-8,387 +/-9.095	1.60%	+/-0.1	95,131 150,105	+/-3,535 +/-4,337	1.00%	+/-0.1
Native Hawaiian and Other Pacific	147,286	+/-1,999	0.40%	+/-0.1	26.074	+/-4,337	0.30%	+/-0.1
Islander Native Hawaiian	23.685	+/-1,680	0.10%	+/-0.1	4,518	+/-740	0.00%	+/-0.1
Guamanian or Chamorro	24,098	+/-1,791	0.10%	+/-0.1	4,144	+/-703	0.00%	+/-0.1
Samoan	40,075	+/-2,141	0.10%	+/-0.1	11,451	+/-1,112	0.10%	+/-0.1
Other Pacific Islander	59,428	+/-2,374	0.20%	+/-0.1	5,961	+/-768	0.10%	+/-0.1
Some other race	4,890,329	+/-34,831	12.80%	+/-0.1	1,949,940	+/-21,018	19.50%	+/-0.2
Two or more races	1,698,173	+/-22,403	4.50%	+/-0.1	387,845	+/-6,956	3.90%	+/-0.1
White and Black or African American White and American Indian and	225,328	+/-5,643	0.60%	+/-0.1	48,420	+/-2,372	0.50%	+/-0.1
Alaska Native	265,684	+/-5,511	0.70%	+/-0.1	52,560	+/-1,915	0.50%	+/-0.1
White and Asian Black or African American and	465,080	+/-8,178	1.20%	+/-0.1	94,095	+/-2,985	0.90%	+/-0.1
American Indian and Alaska Native	39,939	+/-2,473	0.10%	+/-0.1	14,120	+/-1,283	0.10%	+/-0.1
Race alone or in combination with one or								
more other races Total population	38,066,920		38,066,920	(X)	9,974,203	*****	9,974,203	(X)
White	25,049,792		65.80%	(X) +/-0.1	5,638,519	+/-20,921	9,974,203 56.50%	(X) +/-0.2
Black or African American	2,697,319	+/-6,162	7.10%	+/-0.1	941,865	+/-3,083	9.40%	+/-0.1
American Indian and Alaska Native	707,548			+/-0.1	152,571	+/-4,750	1.50%	+/-0.1
Asian Native Hawaiian and Other Pacific	5,846,268	+/-7,071	15.40%	+/-0.1	1,545,250	+/-2,768	15.50%	+/-0.1
Islander Some other race	299,503 5,328,475	+/-4,202	0.80%	+/-0.1	53,161 2,071,702	+/-1,531 +/-19,748	0.50%	+/-0.1
Some other race	3,326,475	+/-31,448	14.00%	+/-∪.1	2,071,702	*/-19,748	20.80%	+/-0.2
IISPANIC OR LATINO AND RACE								
Total population	38,066,920		38,066,920 38,20%	(X)			9,974,203 48 10%	(X)
Hispanic or Latino (of any race) Mexican	14,534,449 12,108,744	+/-20,834	38.20%	+/-0.1	4,800,491 3,668,016	+/-11,544	48.10% 36.80%	+/-0.1
Puerto Rican	207,878	+/-5,582	0.50%	+/-0.1	48,333	+/-2,384	0.50%	+/-0.1
Cuban	92,022			+/-0.1	40,277	+/-2,239	0.40%	+/-0.1
Other Hispanic or Latino Not Hispanic or Latino	2,125,805 23,532,471	+/-19,249	5.60% 61.80%	+/-0.1	1,043,865 5,173,712	+/-11,170	10.50% 51.90%	+/-0.1
White alone	14,905,601	+/-3,435	39.20%	+/-0.1	2,711,665	+/-1,600	27.20%	+/-0.1
Black or African American alone	2,155,929			+/-0.1	802,132		8.00%	+/-0.1
American Indian and Alaska Native alone	145,736	+/-2,746	0.40%	+/-0.1	18,207	+/-1,056	0.20%	+/-0.1
Asian alone	5,062,736	+/-8,006	13.30%	+/-0.1	1,377,333	+/-3,502	13.80%	+/-0.1
Native Hawailan and Other Pacific Islander alone	136,464	+/-1,879	0.40%	+/-0.1	23,921	+/-594	0.20%	+/-0.1
Some other race alone	81,869			+/-0.1	24,807	+/-1,707	0.20%	+/-0.1
Two or more races Two races including Some other	1,044,136	+/-11,815	2.70%	+/-0.1	215,647	+/-4,558	2.20%	+/-0.1
race	54,818		0.10%	+/-0.1	15,138	+/-1,139	0.20%	+/-0.1
Two races excluding Some other race, and Three or more races	989,318	+/-11,668	2.60%	+/-0.1	200,509	+/-4,362	2.00%	+/-0.1
Total housing units	13.781.929	+/-1.283	(X)	(X)	3.462.075	+/-1.291	(X)	(X)
	10,101,829	17-1,203	(^)	(X)	0,402,075	-1,291	(٨)	(X)

 Table 3033. Selected western metropolitan statistical areas: Average annual

 expenditures and characteristics, Consumer Expenditure Survey, 2015-2016

ltem	Los Angeles
Number of consumer units (in thousands)	6,321
Consumer unit characteristics:	
Income before taxes	\$76,721
	40.4
Age of reference person	49.4
Average number in consumer unit:	
People	2.8
Children under 18	.7
Adults 65 and older	.3
Earners	1.5
Vehicles	1.7
Percent homeow ner	49
Average annual expenditures	\$64,321
Food	7,984
Food at home	4,225
Cereals and bakery products	515
Meats, poultry, fish, and eggs	1,022
Dairy products	415
Fruits and vegetables	919
Other food at home	1,353
Food aw ay from home	3,760
Alcoholic beverages	512
Housing	23,265
Shelter	15,580
Ow ned dw ellings	7,217
Rented dw ellings	7,701
Other lodging	662
Utilities, fuels, and public services	3,672
Household operations	1,643
Housekeeping supplies	599
Household furnishings and equipment	1,771
Apparel and services	2,858
Transportation	10,038
Vehicle purchases (net outlay)	3,388
Gasoline and motor oil	2,607
Other vehicle expenses	3,370
Public and other transportation	672
Healthcare	3,832
Entertainment	2,664
Personal care products and services	823
Reading	124
Education	1,559
Tobacco products and smoking supplies	151
Miscellaneous	1,440
Cash contributions	1,381
Personal insurance and pensions	7,689
Life and other personal insurance	251
Pensions and Social Security	7,438

	All	1		1	014-2015
ltem	consumer units	Northeast	Midwest	South	West
umber of consumer units (in thousands)	127,734	23,232	28,079	48,115	28,30
onsumer unit characteristics: Income before taxes	\$68,316	\$77,771	\$66,754	\$61,614	\$73,49
Income after taxes	59,453	65,940	58,038	54,606	63,77
Age of reference person Average number in consumer unit:	50.4	52.1	50.0	50.5	49
People	2.5	2.4	2.4	2.5	2
Children under 18	.6	.5	.6	.6	
Adults 65 and older Earners	.4	.4	.3	.4	1
Vehicles	1.9	1.6	2.0	1.8	2
verage annual expenditures	\$54,715	\$59,115	\$53,425	\$50,690	\$59,2
Food Food at home	6,891 3,993	6,867 4,014	6,993 4,137	6,497 3,733	7,4
Cereals and bakery products	518	4,014	4,137	484	4,2
Cereals and cereal products	174	193	179	159	1
Bakery products	344 894	362 899	361 914	325 875	3
Meats, poultry, fish, and eggs Beef	238	211	273	232	2
Pork	171	154	184	179	1
Other meats	124	141	134	113	1
Poultry Fish and seafood	172	186 147	164 105	170	1
Eggs	61	61	55	61	
Dairy products	418	444	456	366	4
Fresh milk and cream	143	152	147	133	1
Other dairy products Fruits and vegetables	274	292 812	308 755	234 686	2
Fresh fruits	279	296	275	240	3
Fresh vegetables	244	269	233	212	2
Processed fruits Processed vegetables	108	118	108 138	97 137	1
Other food at home	132	129	138	137	1,5
Sugar and other sweets	147	134	155	131	1
Fats and oils Miscellaneous foods	113	114 646	113 782	109 661	1
Nonalcoholic beverages	374	646 355	782	661 381	3
Food prepared by consumer unit on out-of-tow n trips	52	54	53	40	
Food aw ay from home	2,898	2,853	2,856	2,764	3,1
Alcoholic beverages Housing	489	543 20.915	516 16 728	392 16.283	5 20.2
Shelter	10,613	13,008	9,471	8,903	12,6
Ow ned dw ellings	6,188	7,759	6,028	5,252	6,6
Mortgage interest and charges	2,912	2,831	2,683	2,632	3,6
Property taxes Maintenance, repairs, insurance, other expenses	1,913	3,332 1,596	1,985 1,360	1,297	1,7
Rented dw ellings	3,702	4,327	2,742	3,022	5,2
Other lodging	722	922	702	629	7
Utilities, fuels, and public services Natural gas	3,901 429	4,266 658	3,737 633	4,000 249	3,5
Bectricity	429	1,366	1,269	1,802	1,2
Fuel oil and other fuels	134	407	118	63	
Telephone services	1,332	1,420	1,254	1,343	1,3
Residential phone service, VOIP, and phone cards Cellular phone service	339 993	458 961	311 942	334 1,009	2
Water and other public services	534	417	463	543	6
Household operations	1,242	1,465	1,064	1,128	1,4
Personal services Other household expenses	397 845	533 932	350 715	349 779	4
Housekeeping supplies	643	594	703	630	6
Laundry and cleaning supplies	152	139	162	156	1
Other household products	361	320	402	358	3
Postage and stationery Household furnishings and equipment	131	135 1,582	140 1,753	116 1,621	1,8
Household textiles	105	104	117	90	1
Furniture	441	414	442	435	4
Floor coverings Major appliances	18	27 208	20 265	11 253	2
Small appliances, miscellaneous housew ares	112	107	122	99	1
Miscellaneous household equipment	771	721	786	734	8
Apparel and services Men and boys	1,817	1,859 445	1,804 461	1,624 364	2,1
Men and boys Men, 16 and over	426	445 355	461 353	364 274	4
Boys, 2 to 15	97	90	108	91	1
Women and girls	676	718	628	615	7
Women, 16 and over Girls, 2 to 15	573 103	622 96	521 106	516 98	6
Girls, 2 to 15 Children under 2	103	96	106	98	1
Footwear	360	350	345	350	4
Other apparel products and services	274	285	270	218 9.309	3
Transportation Vehicle purchases (net outlay)	9,277 3,641	9,177 3,318	9,184 3,630	9,309 4,047	9,3
Cars and trucks, new	1,758	1,611	1,667	2,024	1,5
Cars and trucks, used	1,828	1,679	1,896	1,979	1,6
Other vehicles Gasoline and motor oil	55 2,277	b/ 27 2,037	66 2,244	44 2,332	2,4
Other vehicle expenses	2,277	2,037 2,872	2,244 2,776	2,332	2,4
Vehicle finance charges	212	173	204	240	2
Maintenance and repairs	833	855	821	788	9
Vehicle insurance Vehicle rental, leases, licenses, and other charges	1,095	1,012 832	1,162 590	1,035 436	1,2
Public and other transportation	624	950	534	430	7
lealthcare	4,320	4,453	4,508	4,144	4,3
Health insurance Medical services	2,924	3,173 701	2,965 927	2,840	2,8
Drugs	457	436	927	480	4
Entertainment	2,783	2,748	2,812	2,599	3,0
Fees and admissions	646	757	647	497	8
Audio and visual equipment and services Pets, toys, hobbies, and playground equipment	1,067	1,119	1,030	1,053	1,0
Pets	518	483	547	487	5
Toys, hobbies, and playground equipment	126	117	145	113	1
Other entertainment supplies, equipment, and services	427	272	443	448	5
Personal care products and services Reading	664	701	662 128	597 94	7
Reading Education	1,275	2,082	1,237	94	1,2
Tobacco products and smoking supplies	335	316	394	366	2
Miscellaneous	824	868	837	678	1,0
Cash contributions Personal insurance and pensions	1,793 6,034	1,705 6,748	1,682 5,940	1,787 5,391	1,9
Life and other personal insurance	6,034	6,748	5,940	5,391 291	6,6
		6,334	5,609	5,100	6,3

#### Asseessment Roll Data for Da Vinci Apartments and The Renaisance at City Center

Los Angele	es County or Portal					5161	-001-061				
• Summary											
<b>AIN:</b> 516	1-001	-061 🛛									
Situs Address: 009 W TEMPLE S OS ANGELES CA	т		M P R T	se Type: lulti-Family Residen arcel Type: egular Fee Parcel ax Rate Area: D211	ice			Parcel S Create Delete I Tax Sta Year De Exempt	Date: Date: tus: faulted:	ACTIVE 01/02/2016 CURRENT None	
Building (0101) & Jse Code: Design Type: Quality Class:	Land Overv 0551 0551 DX	riew	# of Units: Beds/Baths: Building SqFt:	287 0/0 342,600		Year Built: Effective Year: Land SqFt:	2015 2015 111,072		P	arcel Map / Map Ind	lex
			2018 R	oll Preparation		2017 Curr	rent Roll	RC	Year		2013 Base Val
Land	ł	\$		12,293,373 \$		12	,052,327	7	2013	S	11,184,29
Improven	nents	\$		109,133,412 \$		106	,993,542	7	2015	s	103,220,10
Tota	L	\$		121,426,785 \$		119	,045,869			s	114,404,39
Assessor's Respo District: Hall of A Region: 23 Cluster: 23408 C	Administratio	n	5	all of Administration 00 W. Temple St. Ri os Angeles, CA 900	oom 180			Toll Free	(213) 974 e: 1 (888) 0 am to 5	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C	Administratio	n IT, CITY Jounty	5	00 W. Temple St. R.	oom 180			Toll Free	e: 1 (888)	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C COUNTY • gov	Administratio	n IT. CITY ounty er and Ta	5 L	00 W. Temple St. R.	oom 180			Toll Free	e: 1 (888)	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C COUNTY • gov	Administratio	n IT. CITY ounty er and Ta	5 L	00 W. Temple St. R.	oom 180 112-2770	iday April 20, 3	2018	Toll Free	e: 1 (888)	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Interest 23408 C County • gov	Administratio CONDO-CEM os Angeles C Treasur	n IT. CITY ounty er and Ta	5 L	00 W. Temple St. R. os Angeles, CA 900	oom 180 112-2770		2018	Toll Free	e: 1 (888)	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Cluster: 2460	Administratio	n IT. CITY County er and Ta Inquiry Number: 51	ax Collector 61-001-061	Last up /ear: 17 Seq.	oom 180 112-2770 dated Fr . No.: 000		2018	Toll Free	e: 1 (888)	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Cluster: 2460	Administratio	n IT. CITY County er and Ta Inquiry Number: 51	ax Collector 61-001-061	Last up /ear: 17 Seq.	oom 180 112-2770 dated Fr . No.: 000	0	2018	Toll Free M-F 7:3	e: 1 (888)	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Cluster: 2460	Administratio	n IT. CITY Iounty er and Ta Inquiry Number: 51 C FUND TR/ 001 061 7	ax Collector 61-001-061	Last up /ear: 17 Seq. NUMBER EQUENCE: 000	oom 180 112-2770 dated Fr . No.: 000	0	taliment :	Toll Free M-F 7:3	e: 1 (888)	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Cluster: 2460	Administratio CONDO-CEM OS Angeles C Freasur ax Payment sessor ID ECTRONIC 19 5161 Tax A	n IT. CITY ounty er and Ta Inquiry Number: 51 C FUND TRJ 001 061 7 Installme	ax Collector 61-001-061	Last up (ear: 17 Seq. NUMBER EQUENCE: 000	oom 180 112-2770 dated Fr . No.: 000	0 Ins	s <b>tallment ;</b> It	Toll Free M-F 7:3	e: 1 (888) D am to 5	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Cluster: 2460	Administratio CONDO-CEN OS Angeles C Treasur ax Payment sessor ID ECTRONIC 19 5161 Tax A Penalty	n IT. CITY ounty er and Ta Inquiry Number: 51 C FUND TR/ 001 061 7 Installme mount	ax Collector 61-001-061 ANSFER (EFT) I YEAR: 17 S889,657.	Last up Last up /ear: 17 Seq. NUMBER EQUENCE: 000	oom 180 112-2770 dated Fr . No.: 000	0 Ins Tax Amoun	s <b>tailment :</b> It [ Dunt [	Toll Free M-F 7:3	640.72 \$0.00	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Cluster: 2460	Administratio CONDO-CEM OS Angeles C Freasur ax Payment sessor ID ECTRONIC 19 5161 Tax A Penalty Total	n IT. CITY IT.	5 L Ax Collector 61-001-061 YEAR: 17 S889,657. \$889,657.	Last up Last up rear: 17 Seq. UMBER EQUENCE: 000	oom 180 112-2770 dated Fr . No.: 000	0 Tax Amoun Pen/Cost Amo Total Due	stallment ; it [ bunt [	Toll Free M-F 7:3	640.72 \$0.00 640.72	807-2111	
District: Hall of A Region: 23 Cluster: 23408 C Cluster: 2460	Administratio CONDO-CEN OS Angeles C Freasur ax Payment sessor ID EC TRONI( 19 5161 Tax A Penalty Total Paid A	n IT. CITY County er and Ta Inquiry Number: 51 C FUND TR/ 001 061 7 Installme mount Amount	5 L ax Collector 61-001-061 YEAR: 17 YEAR: 17 State 11 \$889,657. \$0.	Last up Last up /ear: 17 Seq. NUMBER EQUENCE: 000	oom 180 112-2770 dated Fr . No.: 000	0 Tax Amoun Pen/Cost Amo	tallment it [ bunt [ nt [	Toll Free M-F 7:3	640.72 \$0.00	807-2111	

Delinquent If Not Paid By

<b>is Address:</b> 00 S AVALON BLVD RSON CA 90745-0000		Use Type: Multi-Family Residence Parcel Type: Regular Fee Parcel Tax Rate Area: 13283			Parcel S Create I Delete I Tax Stat Year De Exempt	Date: Date: tus: faulted:	ACTIVE 02/06/2012 CURRENT None	
lding (0101) & Land Overvie Code: 0501 ign Type: 0521 ility Class: DX	w # of Units: Beds/Baths: Building SqFt:	150 0/0 197,344	Year Built: Effective Year: Land SqFt:	2013 2013 128,010		Pa	arcel Map / Map Ir	, ndex
	2018	Roll Preparation	2017 Curr	ent Roll	RC	Year		2006 Base Value
Land	\$	996,496 \$		976,957	9	2006	\$	885,000
Improvements	\$	32,725,827 \$	32	084,145	9	2014	S	25,620,000
Total	\$	33,722,323 \$	33	,061,102			\$	26,505,000
trict: Hall of Administration plon: 23 ster: 23401		Hall of Administration 9 500 W. Temple St. Room 180 Los Angeles, CA 90012-2770			Toll Free	(213) 974- 5: 1 (888) 9 0 am to 5:	807-2111	
	r: 7332-001-058 Yea	Last updated Frid	ay April 20, 20	18				
Assessor ID Numbe	r: 7332-001-058 Yea TRANSFER (EFT) NUI 2 YEAR: 17 SEQ	r: 17 Seq. No.: 000	ay April 20, 20'	18				
ELECTRONIC FUND ID#: 19 7332 001 058	TRANSFER (EFT) NU	r: 17 Seq. No.: 000		liment 2				
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ	r: 17 Seq. No.: 000			\$210,8	35.35		
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058 Instal	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36	r: 17 Seq. No.: 000 MBER UENCE: 000 1	Insta	liment 2		35.35 \$0.00		
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36	r: 17 Seq. No.: 000 MBER UENCE: 000 1	Insta Tax Amount	liment 2		\$0.00		
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$0.00	r: 17 Seq. No.: 000 MBER UENCE: 000 1	Insta Tax Amount Pen/Cost Amour	liment 2		\$0.00 35.35		
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount Total Due	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$0.00 \$210,835.36	r: 17 Seq. No.: 000 MBER UENCE: 000 1	Instal Tax Amount Pen/Cost Amour Total Due	liment 2	\$210,8 \$210,8	\$0.00 35.35		
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058 Insta Tax Amount Penalty Amount Total Due Paid Amount	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$20,835.36	r: 17 Seq. No.: 000 MBER UENCE: 000 1	Insta Tax Amount Pen/Cost Amour Total Due Paid Amount	liment 2	\$210,8 \$210,8	\$0.00 35.35 35.35		
Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount Total Due Paid Amount Balance Due	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$20,835.36	r: 17 Seq. No.: 000 MBER UENCE: 000 1	Insta Tax Amount Pen/Cost Amour Total Due Paid Amount Balance Due	liment 2	\$210,8 \$210,8	\$0.00 35.35 35.35		
Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount Total Due Paid Amount Balance Due Delinquent If Not Pa Message: Assessor ID Number ELECTRONIC FUND	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$0.00 id By	r: 17 Seq. No.: 000 MBER JENCE: 000 1 F Delir r: 13 Seq. No.: 010 MBER	Insta Tax Amount Pen/Cost Amour Total Due Paid Amount Balance Due	liment 2	\$210,8 \$210,8	\$0.00 35.35 35.35		
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount Total Due Paid Amount Balance Due Delinquent If Not Pa Message: Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$0.00 id By r: 7332-001-058 Yea TRANSFER (EFT) NUI	r: 17 Seq. No.: 000 MBER JENCE: 000 1 F Delir r: 13 Seq. No.: 010 MBER	Insta Tax Amount Pen/Cost Amour Total Due Paid Amount Balance Due Inquent If Not Pa	liment 2	\$210,8 \$210,8	\$0.00 35.35 35.35		
Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount Total Due Paid Amount Balance Due Delinquent If Not Pa Message: Assessor ID Numbe ELECTRONIC FUND ID#: 19 7332 001 058	TRANSFER (EFT) NUI         2       YEAR: 17       SEQ         Iment 1       \$210,835.36       \$0.00         \$210,835.36       \$210,835.36       \$0.00         \$210,835.36       \$0.00       \$210,835.36         \$210,835.36       \$0.00       \$210,835.36         \$210,835.36       \$0.00       \$210,835.36         \$210,835.36       \$0.00       \$210,835.36         \$210,835.36       \$0.00       \$210,835.36         \$210,835.36       \$20,000       \$210,835.36         \$210,835.36       \$20,000       \$210,835.36         \$210,835.36       \$20,000       \$210,835.36         \$210,835.36       \$20,000       \$210,835.36         \$210,835.36       \$20,000       \$210,835.36         \$210,835.36       \$20,000       \$210,835.36         \$210,835.36       \$20,000       \$210,835.36         \$22,920,000       \$22,920       \$22,920         \$22,920,000       \$22,920       \$22,920         \$22,920,000       \$22,920       \$22,920         \$22,920,000       \$22,920       \$22,920         \$22,920,000       \$22,920       \$22,920         \$22,920,000       \$22,920       \$22,920         \$22,9	r: 17 Seq. No.: 000 MBER JENCE: 000 1 F Delir r: 13 Seq. No.: 010 MBER	Insta Tax Amount Pen/Cost Amour Total Due Paid Amount Balance Due Inquent If Not Pa	int	\$210,83	\$0.00 35.35 35.35 \$0.00		
Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Insta Tax Amount Penalty Amount Total Due Paid Amount Balance Due Delinquent If Not Pa Message: Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Insta Tax Amount	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$0.00 d By r: 7332-001-058 Yea TRANSFER (EFT) NUI 2 YEAR: 13 SEQ Iment 1 \$74,918.98	r: 17 Seq. No.: 000 MBER JENCE: 000 1 F Delir r: 13 Seq. No.: 010 MBER JENCE: 010 4	Insta Tax Amount Pen/Cost Amount Paid Amount Balance Due Inquent If Not Pa	liment 2	\$210,8: \$210,8: \$210,8: \$74,9	\$0.00 35.35 \$0.00 \$0.00		
Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount Delinquent If Not Pa Message: Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Instal Tax Amount Penalty Amount	TRANSFER (EFT) NUI         2       YEAR: 17       SEQ         Iment 1       \$210,835.36       \$0.00         \$210,835.36       \$210,835.36       \$0.00         \$210,835.36       \$0.00       \$0.00         id By	r: 17 Seq. No.: 000 MBER JENCE: 000 1 F Delir r: 13 Seq. No.: 010 MBER JENCE: 010 4	Instal Tax Amount Pen/Cost Amour Total Due Paid Amount Balance Due Inquent If Not Pa Instal Tax Amount Pen/Cost Amour	liment 2	\$210,8 \$2	\$0.00 35.35 35.35 \$0.00 18.97 \$0.00		
Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Insta Tax Amount Penalty Amount Total Due Paid Amount Balance Due Delinquent If Not Pa Message: Assessor ID Number ELECTRONIC FUND ID#: 19 7332 001 058 Insta Tax Amount	TRANSFER (EFT) NUI 2 YEAR: 17 SEQ Iment 1 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$210,835.36 \$0.00 d By r: 7332-001-058 Yea TRANSFER (EFT) NUI 2 YEAR: 13 SEQ Iment 1 \$74,918.98	r: 17 Seq. No.: 000 MBER JENCE: 000 1 F Delir r: 13 Seq. No.: 010 MBER JENCE: 010 4	Insta Tax Amount Pen/Cost Amount Paid Amount Balance Due Inquent If Not Pa	liment 2	\$210,8: \$210,8: \$210,8: \$74,9	\$0.00 35.35 35.35 \$0.00 18.97 \$0.00		

Delinquent If Not Paid By

#### **Consumer Price Index Table**

ear	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2008	220.918	221.431	223.606	224.625	226.651	229.033	229.886	228.484	227.449	226.159	222.229	219.62	225.008	224.377	225.638
2009	220.719	221.439	221.376	221.693	222.522	223.906	224.01	224.507	225.226	225.264	224.317	223.643	223.219	221.943	224.495
2010	224.61	224.62	225.483	225.916	226.438	225.877	225.991	226.373	226.048	226.794	225.941	226.639	225.894	225.491	226.298
2011	228.652	229.729	232.241	233.319	233.367	232.328	231.303	231.833	233.022	233.049	232.731	231.567	231.928	231.606	232.251
2012	233.441	234.537	236.941	236.866	237.032	236.025	235.776	237.222	238.104	240.111	237.675	236.042	236.648	235.807	237.488
2013	238.015	239.753	239.995	239.043	239.346	239.223	238.92	239.219	239.611	239.94	238.677	238.742	239.207	239.229	239.185
2014	239.857	241.059	242.491	242.437	243.362	243.528	243.727	243.556	243.623	243.341	241.753	240.475	242.434	242.122	242.746
2015	239.724	241.297	243.738	243.569	246.093	245.459	247.066	246.328	245.431	245.812	245.711	245.357	244.632	243.313	245.951
2016	247.155	247.113	247.873	248.368	249.554	249.789	249.784	249.7	250.145	251.098	250.185	250.189	249.246	248.309	250.184
2017	252.373	253.815	254.525	254.971	255.674	255.275	256.023	256.739	257.89	258.883	259.135	259.22	256.21	254.439	257.982
2018	261.235	263.012											262.6153		

Source: BLS

#### **RIMS II Multipliers, Final Demand, LA County**

Table 2.5 Total Multipliers - industry aggregations	
Region: Los Angeles County, CA (Type I)	Final-demand Output /1/ (dollars)
Farms	1.2395
Forestry, fishing, and related activities	1.1755
Oil and gas extraction	1.1722
Mining, except oil and gas	1.3815
Support activities for mining	1.3062
Utilities*	1.3392
Construction	1.4077
Wood product manufacturing	1.4276
Nonmetallic mineral product manufacturing	1.4512
Primary metal manufacturing	1.4284
Fabricated metal product manufacturing	1.4582
Machinery manufacturing	1.4726
Computer and electronic product manufacturing	1.4048
Electrical equipment and appliance manufacturing	1.4448
Motor vehicles, bodies and trailers, and parts manufacturing	1.5125
Other transportation equipment manufacturing	1.4258
Furniture and related product manufacturing	1.4806
Miscellaneous manufacturing	1.5021
Food and beverage and tobacco product manufacturing	1.4745
Textile mills and textile product mills	1.4835
Apparel and leather and allied product manufacturing	1.5088
Paper manufacturing	1.3913
Printing and related support activities	1.3913
Petroleum and coal products manufacturing	1.4790
· · ·	
Chemical manufacturing	1.434
Plastics and rubber products manufacturing	1.5266
Wholesale trade	1.3758
Motor vehicle and parts dealers	1.2513
Food and beverage stores	1.3738
General merchandise stores	1.4093
Other retail	1.4341
Air transportation	1.5387
Rail transportation	1.4684
Water transportation	1.7148
Truck transportation	1.6514
Transit and ground passenger transportation*	1.5697
Pipeline transportation	1.3569
Other transportation and support activities*	1.5326
Warehousing and storage	1.4683
Publishing industries, except internet (includes software)	1.4657
Motion picture and sound recording industries	1.6347
Broadcasting and telecommunications	1.5398
Data processing, internet publishing, and other information services	1.4992
Federal Reserve banks, credit intermediation, and related activities	1.524
Securities, commodity contracts, and investments	1.7207
Insurance carriers and related activities	1.474
Funds, trusts, and other financial vehicles	2.1079
Real estate	1.3335
Rental and leasing services and lessors of intangible assets	1.4217
Professional, scientific, and technical services	1.4043
Management of companies and enterprises	1.459
Administrative and support services	1.3566
Waste management and remediation services	1.4955
Educational services	1.4601
Ambulatory health care services	1.400
Hospitals	1.4193
Nursing and residential care facilities	1.450
Social assistance	1.4193
	1.5879
Performing arts, spectator sports, museums, and related activities	
Amusements, gambling, and recreation industries	1.4985
Accommodation	1.394
Food services and drinking places	1.4714
Other services*	1.476

Source: BLS

Mid-Rise Residential Building Construction and Total SF, historical and projection

Mid-Rise	Mid-Rise Residential Bulding (20+ units) Construction Activity								
	# Units SF								
2014	8,987	9,750,895							
2015	13,600	14,756,000							
2016	11,233	12,187,805							
2017	10,967	11,899,195							
2018	11,197	12,148,745							
2019	11,421	12,391,785							
2020	11,739	12,736,544							
2021	11,676	12,667,940							
2022	11,165	12,114,328							
2023	10,403	11,287,601							
2024	9,622	10,440,032							
2025	9,419	10,219,890							
2026	9,420	10,221,193							
2027	9,446	10,248,548							
2028	9,474	10,279,810							

Sources: Data.lacity.org, LAEDC and Census