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PROJECT NAME:	LA County Residential Parking Study
PROJECT NUMBER:	37-009377.00

The following memorandum comprises Task 2.3 *Demographic and Socioeconomic Data* of the referenced parking study.

INTRODUCTION

In this section, Walker provides descriptive statistics of data drawn from publicly available sources including the U.S. Census Bureau, specifically the 2019 American Community Survey 5-Year Estimates product to present the socio-economic and demographic data for the unincorporated areas of Los Angeles County. This task allows us to increase our understanding of the characteristics of unincorporated communities to identify:

- Justification for changes to the County's parking ordinance (Title 22.112) and
- Possible differences within communities that could help inform how a revision of parking requirements on a County-wide level may merit context-specific recommendations rather than the current "one-size-fits-all" solution.[1]

FINDINGS

In general, while we find that car reliance is high for residents of unincorporated communities regardless of housing tenure (i.e., owner vs. renter), there are slight differences. For example, home ownership is slightly more correlated with driving alone than is renting. When we looked at all commute modes, we found that owners are more likely to drive alone and work from home, while renters are more likely to utilize public transportation, walk, taxi, motorcycle, bike, or use other means, indicating that where other (non-SOV) commuting options are available, such as near high-frequency transit, residents of multifamily properties (typically renters) may be more inclined to utilize those modes than owners. This may translate into less demand for parking as compared to owner-occupied units.

We also found that there is a strong relationship between housing tenure and vehicles available. The relationship strength shifts between owners and renters as more vehicles become available in the home. For example, for owners the Pearson R (a strong positive relationship is generally between 0.5 and 1, and where a strong negative relationship is generally between -1 and -0.5) is 0.664 when no vehicles are available, and it is 0.946 for renters. As more vehicles are available owners tend to have a stronger correlation than renters with higher Pearson R values, while the Pearson R value reduces for renters as more vehicles become available. Though it must be noted that the relationship between renters and available vehicles remains fairly strong

[1] Currently, there is one requirement in effect through the parking ordinance that applies across the unincorporated communities of the County, except where adjusted through specific plan areas or other mechanisms.

throughout. Nonetheless, we can infer in general terms that owners typically have more vehicles available than renters.

What this means for our study is that an examination of the parking requirements merit closer revision for multifamily developments so as to ensure that current requirements do not result in an oversupply of parking. Requiring too much parking not only results in a significant number of spaces simply sitting empty but is a tremendous waste of resources. As we saw in the literature review on housing costs (Task 2.2), over requiring parking impedes the development of multifamily housing and ultimately impacts housing affordability. It also strongly favors the drive-alone mode share over more environmentally and economically sustainable modes of transportation.

METHODOLOGY

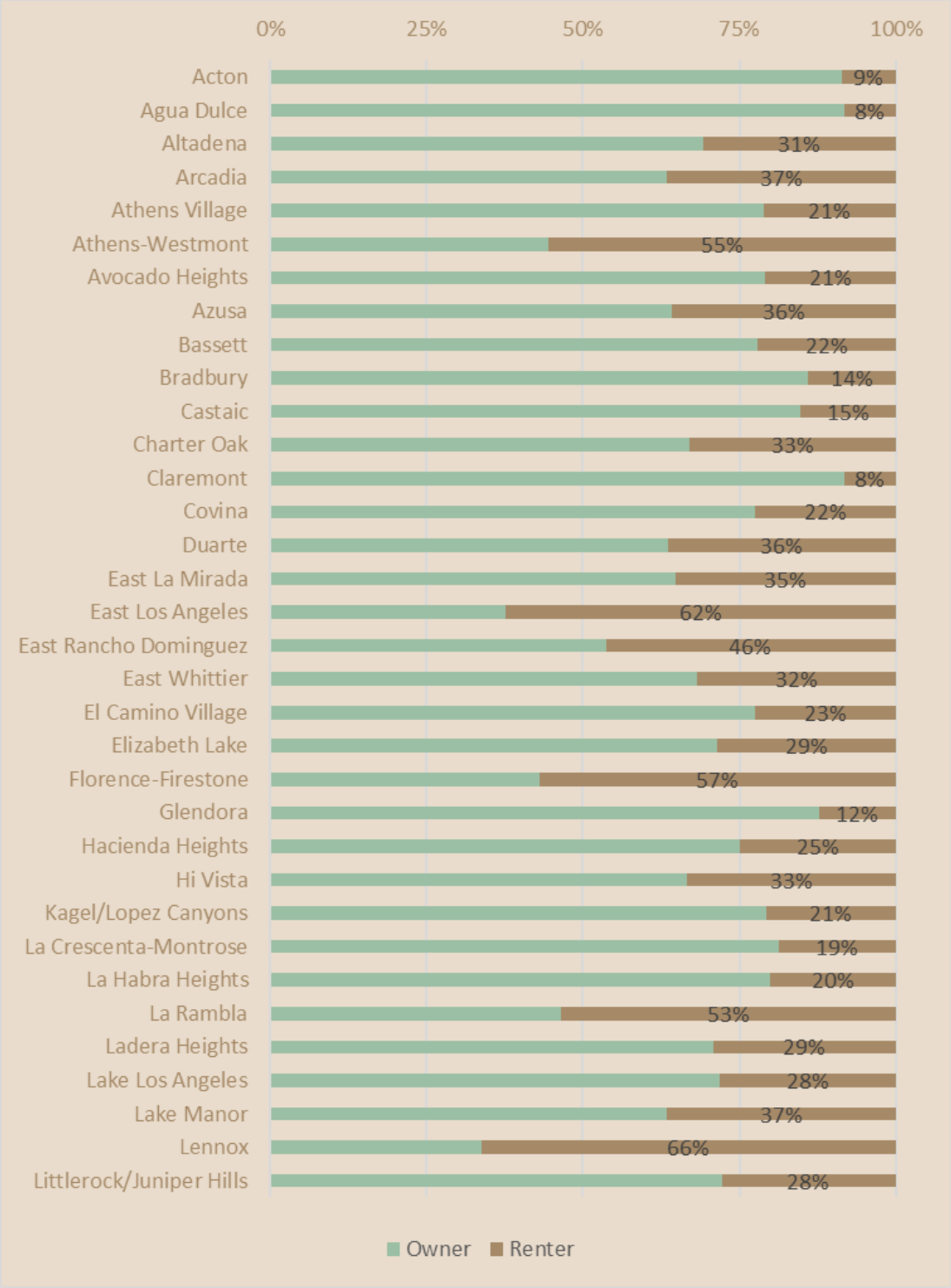
To analyze the unincorporated areas of the County of Los Angeles, Walker conducted a process of data wrangling to make the dataset workable on an unincorporated community level. First, Walker gathered data by census tract for the entire County of Los Angeles from the U.S. Census Bureau's 2019 American Community Survey 5-year Estimates. There are 2,000+ census tracts in the county. Second, using ESRI's ArcMap, Walker mapped the census tracts in the county and overlayed them with a layer of all the unincorporated communities in the county. This allowed us to select only those census tracts that overlap with the unincorporated areas, approximately 300, and filter out all others. Lastly, we grouped the census tract data based on the community which it overlapped. It must be noted that in some cases census tracts were overlapped by more than one community. In those cases, the community whose area covered more of the census tract was selected. The following analysis is presented by unincorporated community.

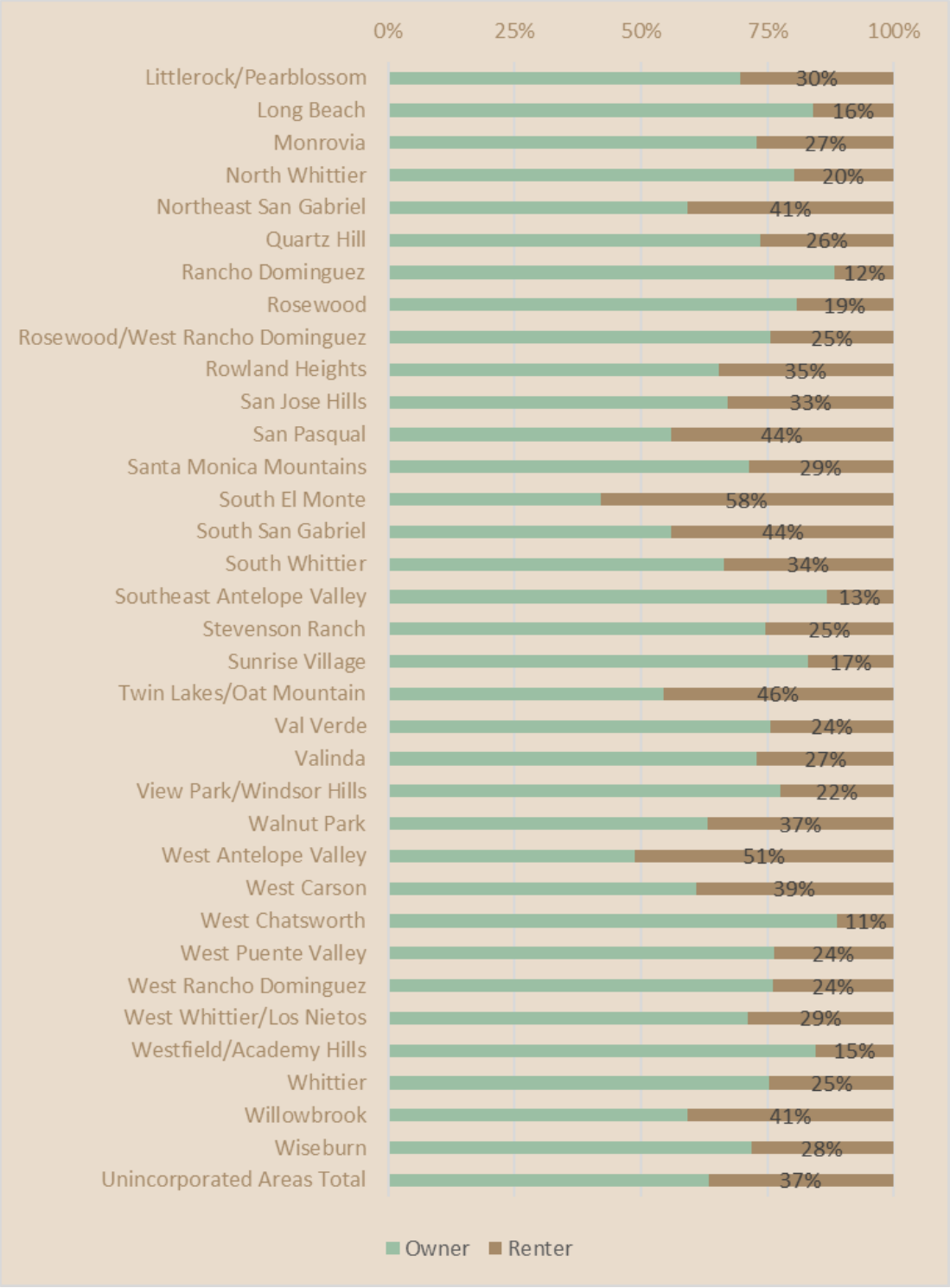
HOUSING TENURE

Given the multifamily housing focus of this study, one characteristic we sought to understand was housing tenure, meaning the percentage of housing units that are occupied by owners or renters. Figure 1 shows housing tenure in the unincorporated communities. It must be noted that in some instances, the housing tenure data were not available for certain unincorporated communities. Therefore, the following figure contains only the communities for which data were available, plus a total for all unincorporated areas.

In the bar chart below, brown indicates the percentage of renters while green indicates the percentage of homeowners. The percentage of homeownership versus renter varies significantly by community.

Figure 1: Housing Tenure (Owner or Renter)





Source: American Community Survey 5-Year Estimates, 2019

Based on this data, we can infer that in most unincorporated communities, owner occupied units make up a larger percentage of the total. This contrasts with the finding in the County of Los Angeles as a whole

(incorporated + unincorporated), where renters makeup the majority[2]. Nonetheless, in the unincorporated areas there are a handful communities where renter occupied units makeup a majority. These communities include:

- Athens-Westmont (55% renter)
- East Los Angeles (62% renter)
- Florence-Firestone (57% renter)
- La Rambla (53% renter)
- Lennox (66% renter)
- South El Monte (58% renter)
- West Antelope Valley (51% renter)

MODAL SPLIT (COMMUTING)

In parking planning, one dataset we look at is the modal split for commuting to work, to evaluate transportation behavior. In other words, the type of transportation that residents use to reach their place of employment. In this case, we pulled modal split information from the U.S. Census Bureau's 2019 American Community Survey 5-Year Estimates product. The following figure shows the modal split by unincorporated community.

[2] In the County of Los Angeles there are 46% owner-occupied units, and 64% renter occupied units. Data retrieved from: https://www.census.gov/quickfacts/losangelescountycalifornia

Figure 2: Modal Split by Community

Community	Drove Alone	Carpooled	Public Transportation	Walked	Taxi/Moto/Bike /Other	Worked From Home
Acton	76%	17%	2%	1%	0%	4%
Agua Dulce	80%	8%	2%	3%	1%	5%
Altadena	78%	7%	4%	2%	3%	7%
Arcadia	82%	7%	5%	1%	1%	4%
Athens Village	77%	10%	8%	0%	5%	1%
Athens-Westmont	76%	11%	8%	1%	2%	2%
Avocado Heights	88%	6%	1%	2%	0%	2%
Azusa	81%	10%	3%	1%	2%	3%
Bassett	80%	11%	2%	2%	2%	3%
Bradbury	74%	8%	4%	0%	0%	13%
Castaic	79%	11%	1%	2%	1%	6%
Charter Oak	78%	11%	4%	2%	2%	3%
Claremont	75%	8%	4%	0%	2%	11%
Covina	81%	10%	4%	1%	1%	3%
Duarte	69%	25%	2%	2%	2%	0%
East La Mirada	92%	4%	1%	1%	0%	2%
East Los Angeles	72%	12%	8%	4%	2%	2%
East Rancho Dominguez	75%	13%	5%	1%	2%	3%
East Whittier	82%	9%	1%	1%	3%	3%
El Camino Village	81%	10%	2%	2%	2%	4%
Elizabeth Lake	80%	5%	0%	0%	0%	16%
Florence-Firestone	68%	13%	11%	3%	3%	2%
Glendora	77%	12%	3%	0%	1%	6%
Hacienda Heights	80%	11%	2%	1%	1%	6%
Hi Vista	88%	6%	0%	0%	0%	6%
Kagel/Lopez Canyons	74%	15%	5%	2%	2%	3%
La Crescenta-Montrose	87%	6%	1%	1%	1%	3%
La Habra Heights	82%	12%	0%	0%	2%	5%
La Rambla	82%	9%	1%	0%	0%	8%
Ladera Heights	80%	7%	2%	0%	2%	7%
Lake Los Angeles	87%	5%	1%	0%	1%	6%
Lake Manor	71%	13%	0%	2%	5%	9%
Lennox	65%	18%	6%	3%	6%	3%
Littlerock/Juniper Hills	74%	19%	1%	0%	0%	6%

Community	Drove Alone	Carpooled	Public Transportation	Walked	Taxi/Moto/Bike /Other	Worked From Home
Littlerock/Pearblossom	84%	4%	0%	1%	2%	10%
Long Beach	83%	11%	1%	0%	2%	3%
Monrovia	82%	9%	3%	0%	1%	5%
North Whittier	82%	11%	1%	0%	2%	4%
Northeast San Gabriel	81%	9%	3%	1%	2%	4%
Quartz Hill	82%	10%	2%	0%	1%	5%
Rancho Dominguez	88%	10%	1%	0%	0%	1%
Rosewood	87%	6%	2%	3%	0%	2%
Rosewood/West Rancho Dominguez	82%	4%	3%	5%	0%	7%
Rowland Heights	77%	12%	2%	1%	1%	6%
San Jose Hills	77%	16%	2%	1%	1%	3%
San Pasqual	81%	5%	4%	1%	3%	6%
Santa Monica Mountains	77%	4%	0%	3%	2%	14%
South El Monte	80%	13%	3%	1%	0%	2%
South San Gabriel	78%	13%	3%	0%	1%	4%
South Whittier	85%	9%	1%	1%	1%	3%
Southeast Antelope Valley	81%	12%	0%	0%	0%	7%
Stevenson Ranch	81%	7%	2%	0%	2%	7%
Sunrise Village	87%	12%	0%	0%	1%	0%
Twin Lakes/Oat Mountain	88%	8%	0%	0%	0%	4%
Val Verde	76%	18%	2%	0%	2%	2%
Valinda	80%	12%	3%	1%	1%	2%
View Park/Windsor Hills	79%	1%	4%	1%	5%	11%
Walnut Park	72%	16%	6%	2%	3%	2%
West Antelope Valley	78%	11%	3%	0%	0%	9%
West Carson	81%	8%	1%	4%	3%	2%
West Chatsworth	79%	5%	1%	0%	2%	12%
West Puente Valley	79%	13%	2%	2%	1%	3%
West Rancho Dominguez	79%	14%	3%	0%	0%	3%
West Whittier/Los Nietos	86%	6%	3%	1%	0%	4%
Westfield/Academy Hills	83%	5%	0%	2%	2%	8%
Whittier	81%	9%	1%	1%	2%	6%
Willowbrook	77%	11%	4%	2%	2%	4%
Wiseburn	82%	8%	4%	0%	3%	3%
Unincorporated Areas Total	78%	10%	4%	2%	2%	4%

Source: American Community Survey 5-Year Estimates, 2019

As shown in the figure, most commuters in unincorporated Los Angeles County drive to work alone (also known as Single-Occupancy Vehicle SOV). For the unincorporated areas total, 78 percent of commuters drive alone, 10 percent carpool, 4 percent take public transportation, 2 percent walk, another 2 percent take a taxi/bike/motorcycle/other, and 4 percent work from home. These findings indicate that there is a high usage of single-occupancy vehicles for commuting.

Still, the areas that had the lowest percentages of residents driving alone were:

- Lennox (65%)
- Florence-Firestone (68%)
- Duarte (69%)

- Lake Manor (71%)
- East Los Angeles (72%)
- Walnut Park (72%)

The areas where carpooling had the highest rates were:

- Acton (17%)
- Duarte (25%)
- Lennox (18%)
- Littlerock/Juniper Hills (19%)
- Val Verde (18%)

The highest percentages of residents using public transportation were in:

- Florence-Firestone (11%)
- East Los Angeles (8%)
- Athens Village (8%)
- Athens-Westmont (8%)

The percentage of commuters who walk to work were low overall, but among the higher ones were:

- East Los Angeles (4%)
- Rosewood/West Rancho Dominguez (5%)
- West Carson (4%)

For commuters who take a taxi, motorcycle, biked, or other means, the highest percentages were found in:

- Athens Village (5%)
- Lake Manor (5%)
- Lennox (6%)
- View Park/Windsor Hills (5%)

Lastly, the highest percentages of workers who work from home were found in:

- Bradbury (13%)
- Claremont (11%)
- Elizabeth Lake (16%)
- Littlerock/Pearblossom (10%)
- Santa Monica Mountains (14%)
- View Park/Windsor Hills (11%)
- West Chatsworth (12%)

CORRELATION BETWEEN HOUSING TENURE AND DROVE ALONE (SOV - COMMUTING)

To further understand the relationship between housing tenure and single-occupancy vehicle usage, we ran a correlation analysis. A correlation analysis allows us to test the strength of the relationship between these two variables, whereby a strong positive relationship is generally between 0.5 and 1, and where a strong negative relationship is generally between -1 and -0.5, also known as the Pearson-R. It is important to note that correlation does not equal causation. The results of the correlation analysis are shown as follows.

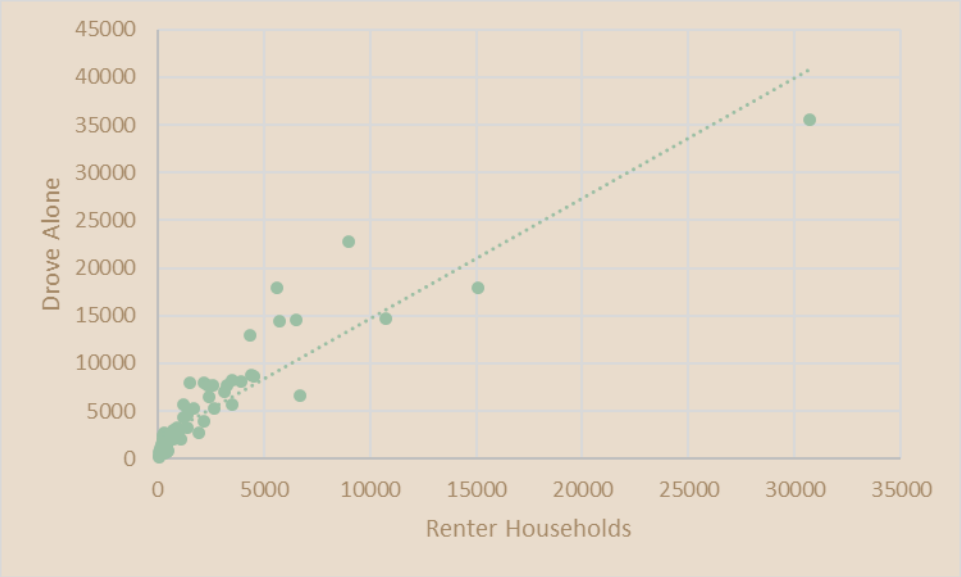
Figure 3: Correlation: Housing Tenure and Drove Alone (SOV)

	Owner	*Renter*	*Drove Alone*
Owner	1		
Renter	0.761425	1	
Drove Alone	0.956322	0.914425	1

Drove Alone X Owner

*Dots closely along the line indicate a higher level of correlation

Drove Alone X Renter



*Dots closely along the line indicate a higher level of correlation
Source: Walker Consultants, 2022

Figure 3 shows the correlation between owner-occupied households and driving alone, and renter-occupied households and driving alone. The Pearson R value for the owner/drove alone relationship is 0.956, which indicates a strong positive relationship between these two variables. When looking at the relationship between renter-occupied households and driving alone, we also find a strong positive relationship as the Pearson R value is 0.914, although the owner-occupied relationship is stronger. From these findings we can infer that both owners and renters are strongly correlated with single-occupant vehicles, but owners show a slightly stronger relationship to SOVs than renters.

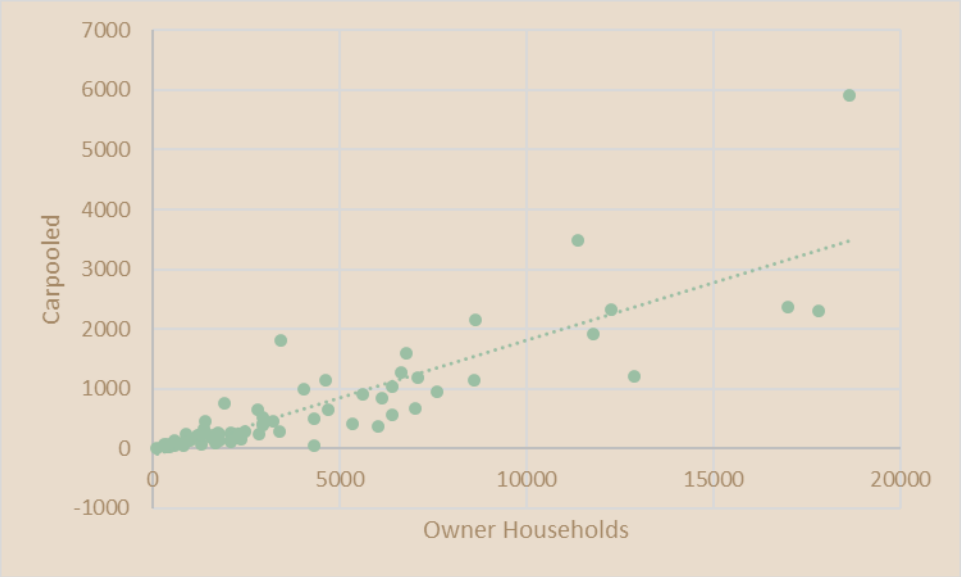
CORRELATION BETWEEN HOUSING TENURE AND CARPOOLING (COMMUTING)

Like with single-occupancy vehicles, to understand the relationship between housing tenure and carpooling, we ran a correlation analysis. Figure 4 shows the correlation between owner-occupied households and carpooling, and renter-occupied households and carpooling.

Figure 4: Correlation: Housing Tenure and Carpooling

	Owner	*Renter*	*Carpooled*
Owner	1		
Renter	0.761425	1	
Carpooled	0.856654	0.953603	1

Carpooled X Owner



*Dots closely along the line indicate a higher level of correlation

Carpooled X Renter

*Dots closely along the line indicate a higher level of correlation

Source: Walker Consultants, 2022

Figure 4 shows a change from what we saw with single-occupant vehicles. In the case of carpooling, renters have a stronger relationship with carpooling than owners, as the resulting Pearson R values are 0.954 (renter) and 0.857 (owner).

CORRELATION BETWEEN HOUSING TENURE AND PUBLIC TRANSPORTATION (COMMUTING)

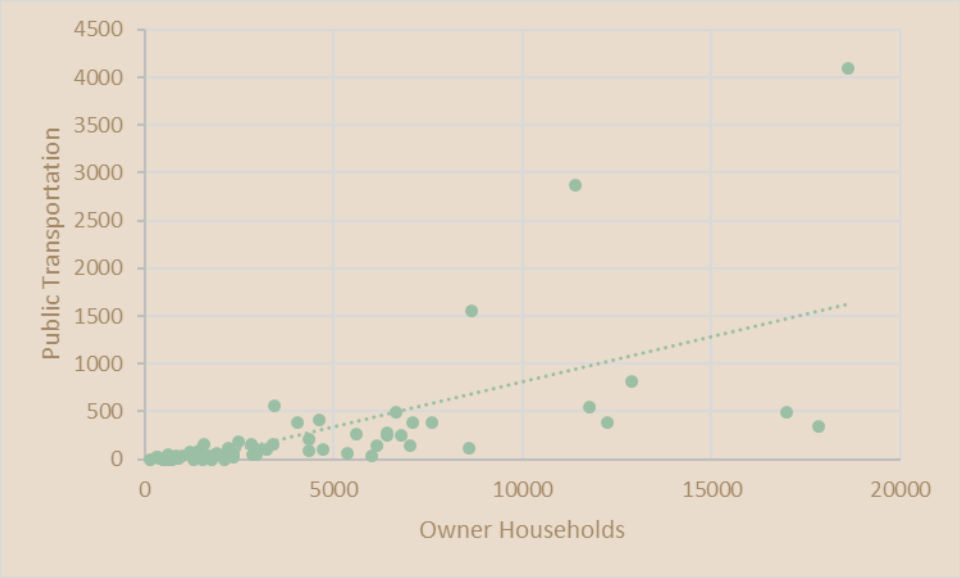
When looking at housing tenure and public transportation as the primary commuting mode, we find that there is a stronger relationship between renters and public transportation than owners and public transportation as

the resulting Pearson R values are 0.646 (owner) and 0.955 (renter). Figure 5 shows the correlation between housing tenure and public transportation.

Figure 5: Correlation: Housing Tenure and Public Transportation

	Owner	*Renter*	*Public Transportation*
Owner	1		
Renter	0.761424578	1	
Public Transportation	0.645544298	0.954562907	1

Public Transportation X Owner



*Dots closely along the line indicate a higher level of correlation

Public Transportation X Renter

*Dots closely along the line indicate a higher level of correlation
Source: Walker Consultants, 2022

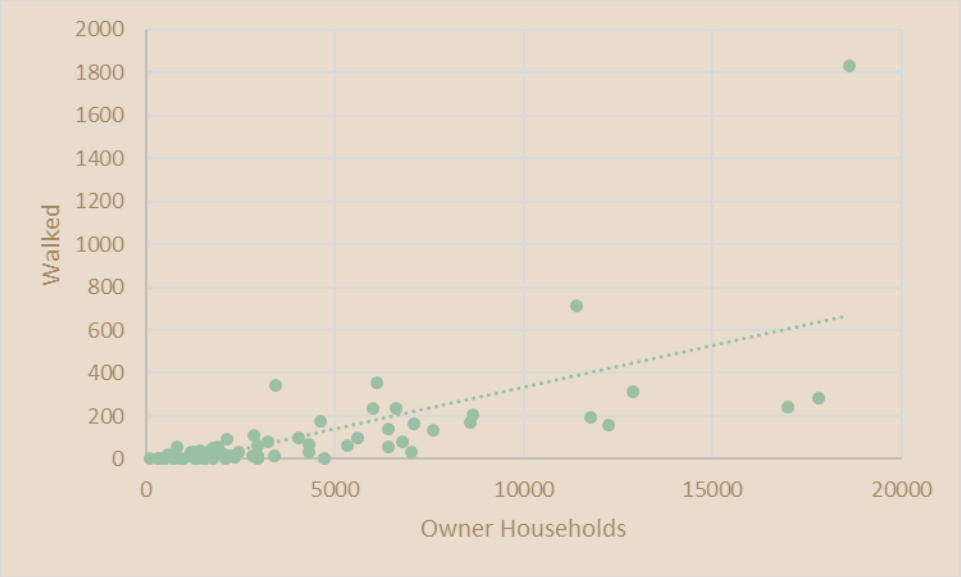
CORRELATION BETWEEN HOUSING TENURE AND WALKING (COMMUTING)

The results of a correlation analysis between housing tenure and walking showed similar results to those of public transportation, where renters have a stronger relationship than owners. Figure 6 shows that the resulting Pearson R value for renters and walking is 0.952, and owners and walking is 0.679.

Figure 6: Correlation: Housing Tenure and Walked

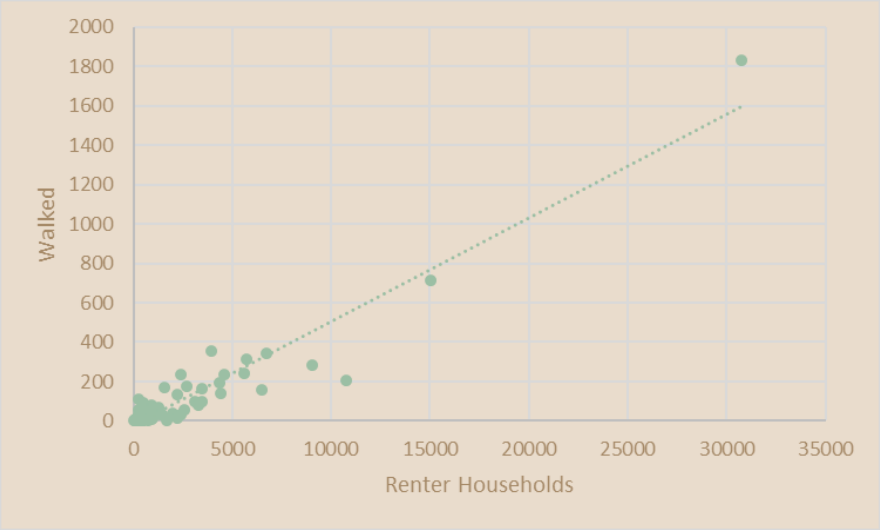
	Owner	*Renter*	*Walked*
Owner	1		
Renter	0.761425	1	
Walked	0.679168	0.951619	1

Walked X Owner



*Dots closely along the line indicate a higher level of correlation

Walked X Renter



*Dots closely along the line indicate a higher level of correlation

Source: Walker Consultants, 2022

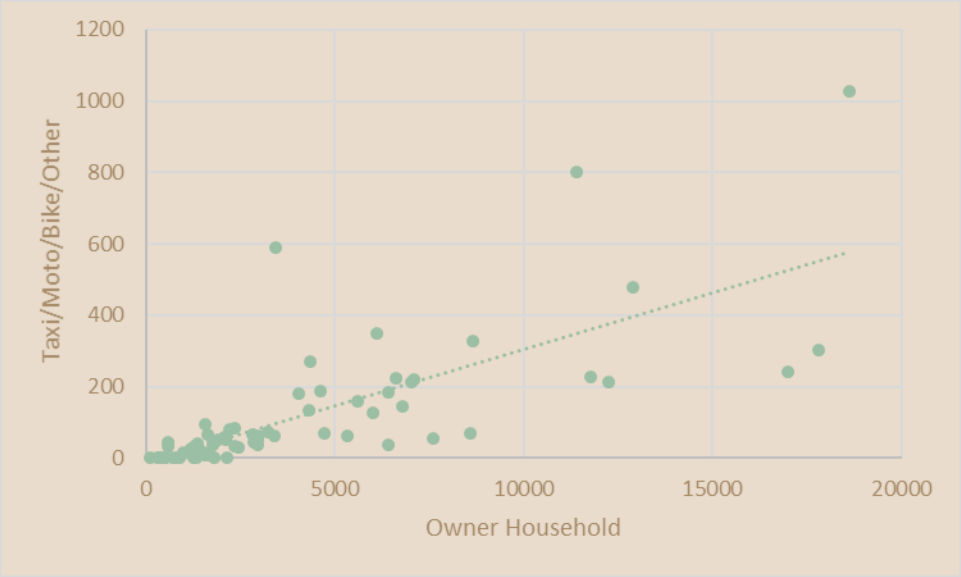
CORRELATION BETWEEN HOUSING TENURE AND TAXI/MOTO/BIKE/OTHER (COMMUTING)

The results of a correlation analysis between housing tenure and use of taxis, motorcycles, bikes, or other means showed that renters have a stronger relationship than owners. The resulting Pearson R values were 0.733 for owners and 0.911 for renters. Figure 7 illustrates the results of the correlation analysis.

Figure 7: Correlation: Housing Tenure and Taxi/Moto/Bike/Other Means

	Owner	*Renter*	*Taxi/Moto/Bike/Other*
Owner	1		
Renter	0.761425	1	
Taxi/Moto/Bike/Other	0.732759	0.911335	1

Taxi/Moto/Bike/Other X Owner



*Dots closely along the line indicate a higher level of correlation

Taxi/Moto/Bike/Other X Renter

*Dots closely along the line indicate a higher level of correlation

Source: Walker Consultants, 2022

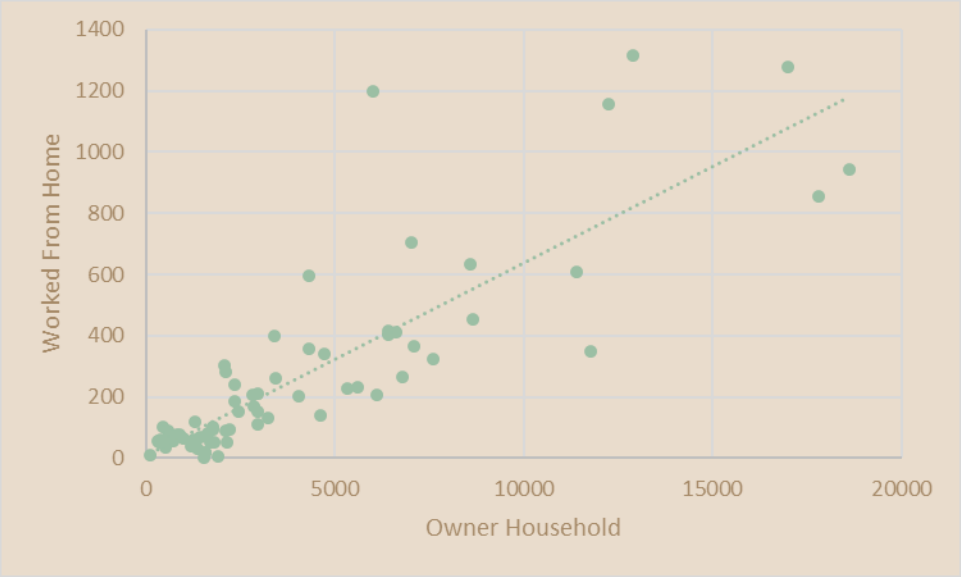
CORRELATION BETWEEN HOUSING TENURE AND WORKED FROM HOME

Lastly, a correlation analysis between housing tenure and people who worked from home demonstrated a stronger relationship between owners and those who work from home, than renters and those who work from home. The Pearson R values were 0.844 (owners) and 0.556 (renters). Figure 8 shows the results in graphical form.

Figure 8: Correlation: Housing Tenure and Worked From Home

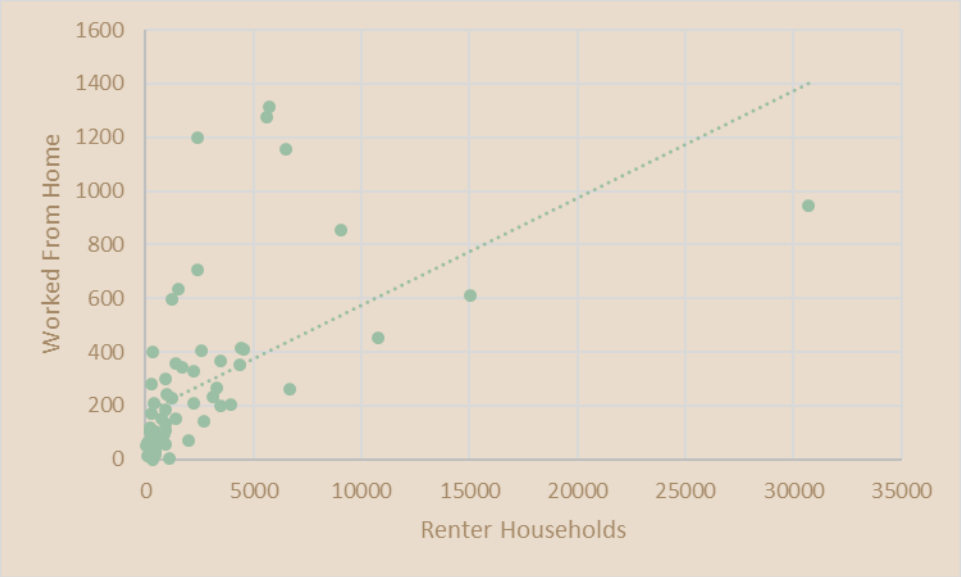
	Owner	*Renter*	*Worked From Home*
Owner	1		
Renter	0.761425	1	
Worked From Home	0.844372	0.556231	1

Worked From Home X Owner



*Dots closely along the line indicate a higher level of correlation

Worked From Home X Renter



*Dots closely along the line indicate a higher level of correlation
Source: Walker Consultants, 2022

CONCLUSION OF CORRELATION ANALYSES

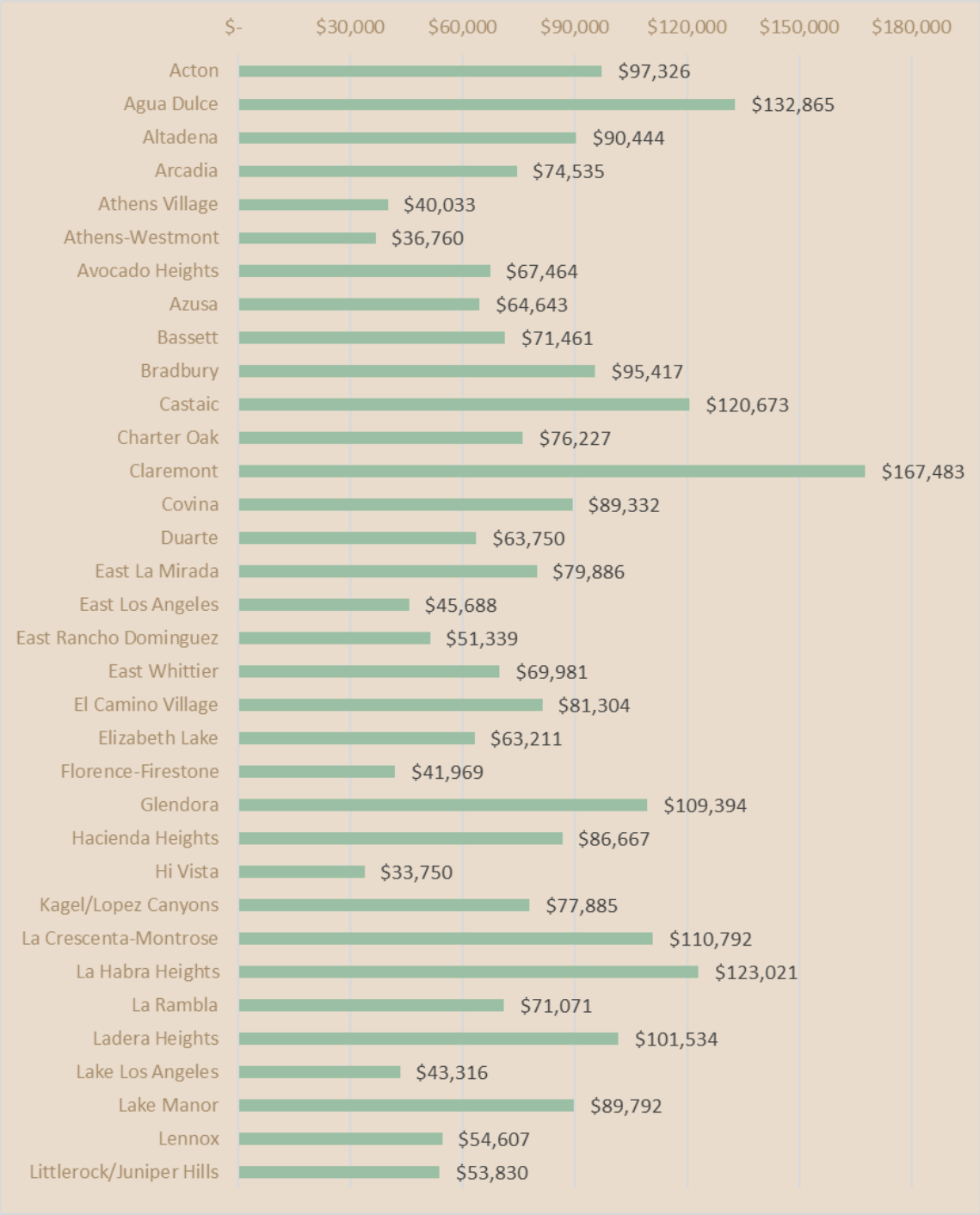
Ultimately, given the results of the correlation analyses run between housing tenure and the varying commuting modes, we infer that home owners are more likely to travel in single-occupancy vehicles (drive alone) and work from home (though it must be noted that renters also have strong relationships in this regard, only less strong than owners), whereas renters are more likely than owners to carpool, use public transportation, walk, and use a taxi, motorcycle, bike, or other means to get to work. What this means for our study of parking requirements for multifamily housing in the county is that where other commuting options are available, such as near high-frequency transit, residents of multifamily properties (i.e., renters) may be more inclined to utilize those modes than owners. This may translate into less demand for parking as compared to owner-occupied units.

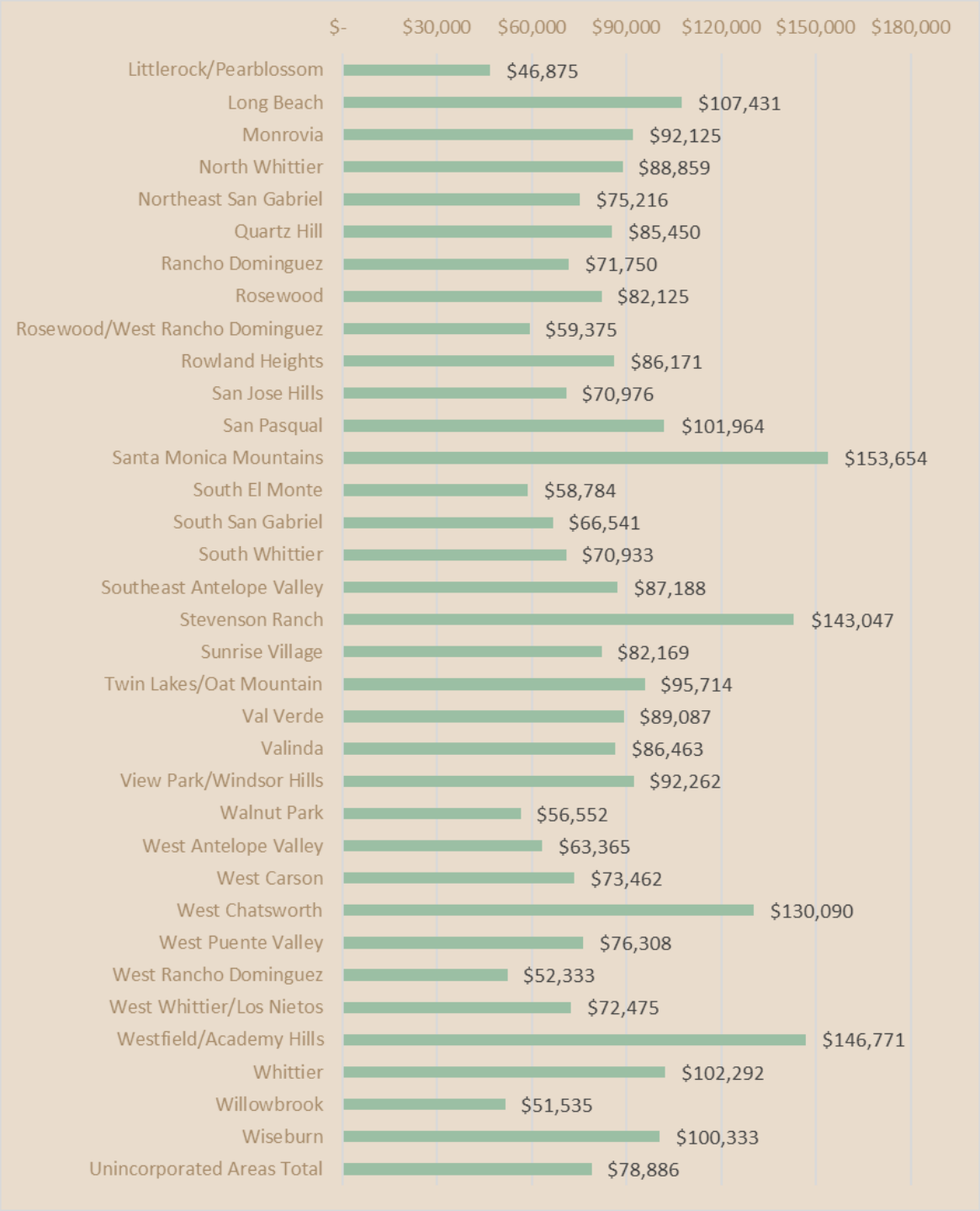
MEDIAN HOUSEHOLD INCOME

To understand the differences and/or similarities between unincorporated communities, Walker also looked at median income within these communities. Median income is the 50th percentile, or the number in the middle of a dataset. In this case it is the median household income in the unincorporated communities.

We used the median to analyze these data as income can often have skewed data, or outliers. In this sense, the median is an appropriate measure of central tendency as it is minimally susceptible to skewed data. Figure 9 shows the median household income by unincorporated community. As with housing tenure, it must be noted that for some communities, data were not available. As such, the following figure contains only the communities for which data were available.

Figure 9: Median Household Income





Source: American Community Survey 5-Year Estimates, 2019

Median household incomes in the unincorporated communities of Los Angeles County range from $33,750 (Hi Vista) on the low end to $167,483 (Claremont) on the high end. For all areas combined the median household income is $78,886. The top five communities with the lowest median household incomes are:

- Hi Vista ($33,750)
- Athens-Westmont ($36,760)
- Athens Village ($40,033)
- Florence-Firestone ($41,969)
- Lake Los Angeles ($43,316)

The top five communities with the highest median household incomes are:

- Claremont ($167,483)
- Santa Monica Mountain Communities ($153,654)
- Westfield/Academy Hills ($146,771)
- Stevenson Ranch ($143,047)
- Agua Dulce ($132,865)

VEHICLES AVAILABLE PER HOUSEHOLD

Another dataset that we gathered to understand vehicle ownership in unincorporated communities, is vehicles available per household. The following figure shows the breakdown of number of vehicles available per household for each unincorporated community.

Figure 10: Vehicles Available Per Household

Community	No Vehicles	1 Vehicle	2 Vehicle	3 Vehicles	4+ Vehicles
Acton	2%	9%	40%	23%	26%
Agua Dulce	1%	10%	35%	29%	24%
Altadena	4%	27%	41%	17%	10%
Arcadia	3%	26%	40%	19%	11%
Athens Village	8%	33%	25%	16%	18%
Athens-Westmont	15%	34%	29%	14%	7%
Avocado Heights	7%	14%	27%	20%	33%
Azusa	3%	24%	37%	18%	18%
Bassett	5%	15%	25%	26%	30%
Bradbury	11%	25%	23%	19%	21%
Castaic	2%	18%	38%	25%	18%
Charter Oak	4%	27%	33%	23%	13%
Claremont	2%	12%	39%	27%	21%
Covina	4%	22%	31%	24%	19%
Duarte	6%	11%	36%	25%	22%
East La Mirada	2%	25%	44%	22%	8%
East Los Angeles	11%	34%	33%	14%	8%
East Rancho Dominguez	8%	22%	31%	20%	18%
East Whittier	8%	34%	33%	16%	9%
El Camino Village	2%	19%	45%	19%	16%
Elizabeth Lake	1%	26%	30%	26%	16%
Florence-Firestone	10%	31%	34%	15%	11%
Glendora	1%	13%	44%	24%	18%
Hacienda Heights	3%	19%	39%	22%	17%
Hi Vista	15%	32%	29%	1%	22%
Kagel/Lopez Canyons	2%	31%	40%	17%	10%
La Crescenta-Montrose	2%	20%	39%	28%	12%
La Habra Heights	3%	11%	47%	17%	22%
La Rambla	6%	39%	40%	9%	7%
Ladera Heights	6%	26%	42%	19%	6%
Lake Los Angeles	3%	31%	36%	20%	10%
Lake Manor	3%	33%	41%	15%	7%
Lennox	8%	34%	29%	17%	13%
Littlerock/Juniper Hills	4%	33%	41%	13%	9%

Community	No Vehicles	1 Vehicle	2 Vehicle	3 Vehicles	4+ Vehicles
Littlerock/Pearblossom	4%	17%	35%	25%	19%
Long Beach	2%	26%	43%	19%	10%
Monrovia	0%	20%	44%	19%	17%
North Whittier	1%	13%	42%	24%	19%
Northeast San Gabriel	5%	30%	39%	16%	9%
Quartz Hill	4%	23%	36%	26%	12%
Rancho Dominguez	2%	30%	36%	17%	14%
Rosewood	11%	30%	27%	21%	12%
Rosewood/West Rancho Dominguez	14%	30%	24%	21%	12%
Rowland Heights	4%	19%	41%	23%	13%
San Jose Hills	3%	19%	34%	24%	20%
San Pasqual	6%	32%	46%	13%	3%
Santa Monica Mountains	2%	24%	45%	19%	10%
South El Monte	8%	20%	30%	22%	20%
South San Gabriel	2%	31%	35%	20%	12%
South Whittier	4%	23%	37%	19%	16%
Southeast Antelope Valley	1%	5%	43%	26%	25%
Stevenson Ranch	2%	20%	47%	18%	12%
Sunrise Village	4%	15%	34%	28%	19%
Twin Lakes/Oat Mountain	1%	25%	48%	18%	8%
Val Verde	1%	8%	42%	27%	23%
Valinda	4%	14%	34%	23%	25%
View Park/Windsor Hills	6%	34%	39%	17%	5%
Walnut Park	9%	25%	31%	21%	14%
West Antelope Valley	0%	24%	34%	29%	13%
West Carson	5%	32%	33%	19%	11%
West Chatsworth	2%	13%	50%	23%	11%
West Puente Valley	4%	15%	27%	32%	22%
West Rancho Dominguez	8%	32%	24%	17%	19%
West Whittier/Los Nietos	4%	22%	41%	17%	15%
Westfield/Academy Hills	4%	22%	42%	21%	12%
Whittier	2%	26%	42%	20%	10%
Willowbrook	11%	29%	30%	19%	11%
Wiseburn	4%	25%	40%	16%	16%
Unincorporated Areas Total	6%	25%	36%	19%	13%

Source: American Community Survey 5-Year Estimates, 2019

As shown in Figure 10 more households contain two (2) vehicles than any other number. Across the county as a whole:

- 6% of households have no vehicles available
- 25% have 1 vehicle available
- 36% have 2 vehicles available
- 19% have 3 vehicles available
- 13% have 4+ vehicles available.

CORRELATION BETWEEN HOUSING TENURE AND VEHICLES AVAILABLE PER HOUSEHOLD

Walker ran a correlation between housing tenure and vehicles available to see how strong the relationship is between these two variables. The following figure shows the results of the analysis.

Figure 11: Correlation: Housing Tenure and Vehicles Available

	Owner	*Renter*	*No Vehicles*	*1 Vehicle*	*2 Vehicles*	*3 Vehicles*	*4+ Vehicles*
Owner	1						
Renter	0.761424578	1					
No Vehicles	0.663960656	0.946218844	1				
1 Vehicle	0.813758439	0.965197146	0.945057933	1			
2 Vehicles	0.949413927	0.87233124	0.795233808	0.927871106	1		
3 Vehicles	0.978673966	0.823192515	0.740162837	0.874433367	0.972918145	1	
4+ Vehicles	0.976147305	0.729093152	0.61735626	0.749106402	0.89342219	0.946198256	1

Source: Walker Consultants, 2022

As shown in Figure 11, generally there is a strong relationship between housing tenure and vehicles available. The interesting finding is how the relationship strength shifts between owners and renters as more vehicles are available. For example, for owners the Pearson R is 0.664 when no vehicles are available, and it is 0.946 for renters. As more vehicles are available owners tend to have a stronger correlation than renters. Though it must be noted that the relationship between renters and available vehicles remains fairly strong throughout. Nonetheless, we can infer that in general terms owners typically have more vehicles available than renters.

WALK SCORE/BIKE SCORE/TRANSIT SCORE

While census data focus on the modal split for commuting trips, there is another source of data that highlights the walkability, access to public transit, and ease of biking in a certain area in general. Walker gathered Walk Score data for the unincorporated areas of the county to measure how different unincorporated communities fare in terms of walkability, access to public transportation, and biking. Walk Score offers the following definitions for each of their scores:

Walk Score:

> *"measures the walkability of any address using a patented system. For each address, Walk Score analyzes hundreds of walking routes to nearby amenities. Points are awarded based on the distance to amenities in each category. Amenities within a 5 minute walk (.25 miles) are given maximum points. A decay function is used to give points to more distant amenities, with no points given after a 30 minute walk.*
>
> *Walk Score also measures pedestrian friendliness by analyzing population density and road metrics such as block length and intersection density. Data sources include Google, Factual, Great Schools, Open Street Map, the U.S. Census, Localeze, and places added by the Walk Score user community."*

Bike Score:

> *"measures whether an area is good for biking. For a given location, a Bike Score is calculated by measuring bike infrastructure (lanes, trails, etc.), hills, destinations and road connectivity, and the number of bike commuters.*
>
> *These component scores are based on data from the USGS, Open Street Map, and the U.S. Census."*

Transit Score:

> *"is a patented measure of how well a location is served by public transit. Transit Score is based on data released in a standard format by public transit agencies.*
>
> *To calculate a Transit Score, we assign a "usefulness" value to nearby transit routes based on the frequency, type of route (rail, bus, etc.), and distance to the nearest stop on the route. The "usefulness" of all nearby routes is summed and normalized to a score between 0 - 100."*

All scores are based on a 0 to 100 rating system, whereby 100 is the highest and best possible score. The following Figure 13 shows the walk scores, bike scores, and transit scores of the unincorporated communities.

Figure 12: Walk, Bike, and Transit Scores for Unincorporated Communities

Community	Walk Score	Bike Score	Transit Score
Acton	42	36	-
Agua Dulce	32	-	-
Altadena	51	44	-
Arcadia	54	47	-
Athens Village	-	-	-
Athens-Westmont	68	53	53
Avocado Heights	49	39	-
Azusa	58	49	43
Bassett	43	39	-
Bradbury	29	24	-
Castaic	24	16	-
Charter Oak	42	47	29
Claremont	48	50	-
Covina	59	48	34
Duarte	48	48	-
East La Mirada	41	-	-
East Los Angeles	75	49	59
East Rancho Dominguez	53	-	-
East Whittier	93	57	-
El Camino Village	60	55	45
Elizabeth Lake	7	20	-
Florence-Firestone	75	56	60
Glendora	47	42	32
Hacienda Heights	35	27	-
Hi Vista	0	-	-
Kagel/Lopez Canyons	4	7	-
La Crescenta-Montrose	53	28	-
La Habra Heights	2	-	-
La Rambla	-	-	-
Ladera Heights	55	-	49
Lake Los Angeles	39	-	-
Lake Manor	35	11	-
Lennox	74	57	54
Littlerock/Juniper Hills	34	36	-

Community	Walk Score	Bike Score	Transit Score
Littlerock/Pearblossom	28	26	-
Long Beach	73	70	49
Monrovia	62	47	35
North Whittier	-	-	-
Northeast San Gabriel	57	56	40
Quartz Hill	35	-	-
Rancho Dominguez	61	74	51
Rosewood	-	-	-
Rosewood/West Rancho Dominguez	28	46	-
Rowland Heights	44	32	-
San Jose Hills	3	5	-
San Pasqual	59	56	42
Santa Monica Mountains	-	-	-
South El Monte	61	55	-
South San Gabriel	58	39	33
South Whittier	55	47	-
Southeast Antelope Valley	0	25	-
Stevenson Ranch	19	20	-
Sunrise Village	63	56	-
Twin Lakes/Oat Mountain	0	6	-
Val Verde	21	-	-
Valinda	54	47	-
View Park/Windsor Hills	60	-	-
Walnut Park	78	-	-
West Antelope Valley	0	25	-
West Carson	56	54	-
West Chatsworth	33	39	31
West Puente Valley	56	50	-
West Rancho Dominguez	28	46	46
West Whittier/Los Nietos	61	57	-
Westfield/Academy Hills	-	-	-
Whittier	64	52	-
Willowbrook	58	52	-
Wiseburn	33	-	-
Unincorporated Areas Average	44	41	44

Source: Walk Score, 2022

The data in Figure 12 show that the top communities for walkability are:

- East Whittier, score of 93
- Walnut Park, score of 78

- East Los Angeles and Florence-Firestone, score of 75
- Lennox, score of 74
- Long Beach, score of 73

The lowest walkability scores were found in:

- Hi Vista, score of 0
- Antelope Valley, score of 0
- La Habra Heights, score of 2
- San Jose Hills, score of 3

In looking at the bike scores, the highest results were found in:

- Rancho Dominguez, score of 74
- Long Beach, score of 70
- East Whittier and Lennox, score of 57

The lowest bike scores were found in:

- San Jose Hills, score of 5
- Twin Lakes/Oat Mountain, score of 6
- Kagel/Lopez Canyons, score of 7
- Lake Manor, score of 11
- Castaic, score of 16

Transit scores were only available for some of the communities, out of that list these were the highest:

- Florence-Firestone, score of 60
- East Los Angeles, score of 59
- Lennox, score of 54

The lowest transit scores were found in:

- Charter Oak, score of 29
- West Chatsworth, score of 31
- Glendora, score of 32

The average score for walk, bike, and transit for the entire unincorporated area was:

- 44 for walkability
- 41 for biking
- 44 for transit

CONCLUSION

Our analysis of car reliance for residents of multifamily and single-family residents in unincorporated communities is high regardless of housing tenure (i.e., owner vs. renter), though we did identify some differences. Given that the overwhelming majority of new housing units built to satisfy the State's Regional Housing Needs Assessment (RHNA) requirements will be contained in multifamily housing developments, we look to see the current trends in automobile reliance for current residents of this typology of housing.

We noted that home ownership is slightly more correlated with driving alone than is renting. When we looked at all commute modes, we found that owners are more likely to drive alone and work from home, while renters are more likely to utilize public transportation, walk, taxi, motorcycle, bike, or use other means, indicating that where other (non-SOV) commuting options are available, such as near high-frequency transit, residents of multifamily properties (typically renters) appear more inclined to utilize those modes than owners. This may translate into less demand for parking as compared to owner-occupied units.

We also found a strong relationship between housing tenure and vehicles available. The relationship strength shifts between owners and renters as more vehicles become available in the home. For example, for owners the Pearson R (a strong positive relationship is generally between 0.5 and 1, and where a strong negative relationship is generally between -1 and -0.5) is 0.664 when no vehicles are available, and it is 0.946 for renters. As more vehicles are available, owners tend to have a stronger correlation than renters with higher Pearson R values, while the Pearson R value reduces for renters as more vehicles become available. Though it must be noted that the relationship between renters and available vehicles remains fairly strong throughout. Nonetheless, we can infer in general terms that owners typically have more vehicles available than renters.

Despite these observed patterns, current parking requirements for single family homes are actually less than they are for apartments containing two or more bedrooms. An examination of the parking requirements merit closer revision for multifamily developments so as to ensure that current requirements do not result in an oversupply of parking or, more importantly for our purposes, do not impede the construction of housing units, particularly during the current Affordable Housing crisis. Requiring too much parking results in a significant number of spaces simply sitting empty, resulting in a tremendous waste of capital and land resources, which in many cases could be allocated to housing units. As we saw in the literature review on housing costs (Task 2.2), over requiring parking impedes the development of multifamily housing and ultimately impacts housing affordability. It also strongly favors the drive-alone mode share over more environmentally and economically sustainable modes of transportation. This analysis identifies one more data point to demonstrate that the current Title 22 Parking Ordinance over requires parking for multifamily housing, impeding the production of much needed housing units.

DATE:	May 13, 2022
TO:	Alyson Stewart
COMPANY:	Department of Regional Planning County of Los Angeles
ADDRESS:	320 W Temple Street
CITY/STATE:	Los Angeles, CA
COPY TO:	Bruce Durbin
FROM:	Tania Schleck, Steffen Turoff
PROJECT NAME:	LA County Residential Parking Study
PROJECT NUMBER:	37-009377.00

The following memorandum comprises Task 2.4 *Data Collection* of the referenced parking study. The Walker Team conducted two data collection efforts to quantify parking demand by dwelling unit. The first was for market-rate multifamily developments and is provided under separate cover. The second was for Affordable, mixed Affordable and market-rate, and senior Affordable multifamily housing, the focus of this memorandum.

FINDINGS

The primary purpose of the data collection task is to quantify parking demand at Affordable, mixed Affordable and market-rate, and senior Affordable multifamily housing properties around the unincorporated communities of LA County, in order to quantify actual parking demand ratios observed at these properties. In analyzing the data, we found the following:

- Methodology
  - The Walker team evaluated the peak parking demand at seven (7) Affordable housing developments, four (4) senior Affordable housing developments, and one (1) mixed market-rate and Affordable housing development.
  - The Walker team quantified off-street (onsite) parking demand and on-street demand to understand the overall parking demand generated by each property.

- Parking demand by property type
  - Affordable housing developments (at a range of affordability levels relative to area median income) had a weighted average of 1.42 parking spaces per dwelling unit.
  - Affordable senior housing developments had a weighted average of 0.59 parking spaces per dwelling unit.
  - The one (1) mixed market-rate and Affordable housing development had a ratio of 1.45 parking spaces per unit.

- Comparison of observed demand to Title 22 of the Los Angeles County Code
  - In comparing the current parking requirements (per Title 22) for Affordable housing developments to the ratios that we collected at survey sites, we see the Title 22 parking requirements are significantly lower than actual demand (0.38 versus 1.42). However, for senior Affordable and mixed market-rate and Affordable, we see the Title 22 requirements are almost identical to actual demand (0.50 versus 0.59 for Affordable senior and 1.42 versus 1.45 for mixed market-rate and Affordable).

- Parking utilization

- 2 of the 12 properties had an off-street parking utilization of over 85 percent while 4 properties had very low off-street parking utilization of less than 50 percent.
- 2 of the 12 properties had on-street parking utilization of over 85 percent while 2 properties had on-street parking utilization of less than 50 percent.
    - In general, when on-street parking experience occupancies greater than 85 percent, users begin to perceive parking as "full" and are likely to spend more time circling to find a space. At 85 percent, most spaces are being utilized, but those drivers seeking a space can find one with minimal searching. The data collected indicates that for 10 of the 12 properties, adequate on-street parking supply is available surrounding the properties.

INTRODUCTION

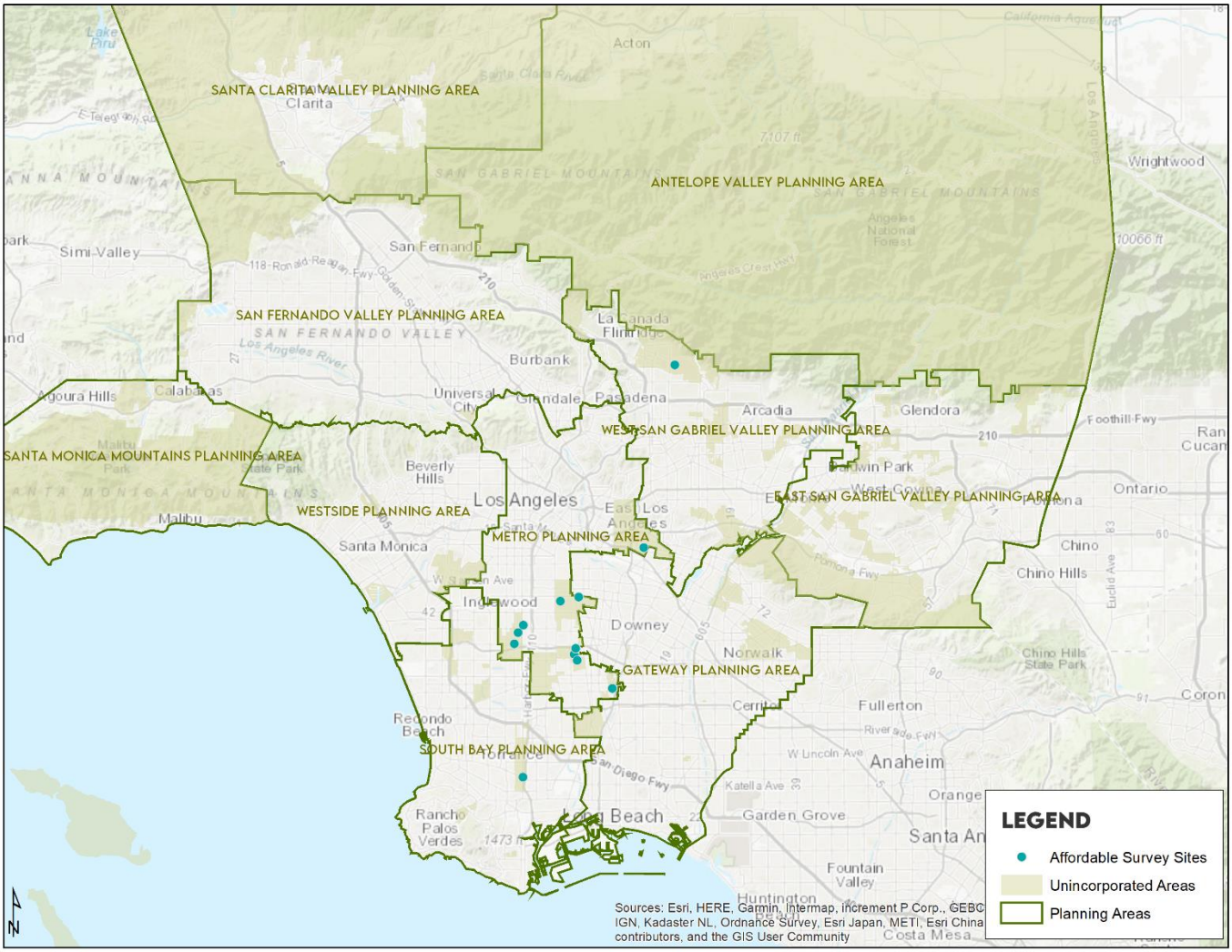
An update of the Parking Ordinance in Title 22 warrants an analysis of current conditions using a number of sources. As such, for this portion of the study, Walker conducted parking occupancy counts at 12 developments across the unincorporated areas of LA County to better understand the demand for Affordable, mixed Affordable and market-rate, and senior Affordable parking.[1] The survey sites were located across three (3) planning areas:

- Metro – 10 sites
- South Bay – 1 site
- West San Gabriel Valley – 1 site

Figure 1 on the following page illustrates the boundaries of the planning areas as well as the general locations of the survey sites.

[1] Walker identified 28 affordable and senior housing properties total in the study area with data provided by LA County. The Walker team reached out to each property owner to gain access to the property. Five (5) of the properties were still under construction, four (4) property owners rejected the request to collected data, and seven (7) did not respond.

Figure 1: Survey Sites Across Planning Areas



Source: Walker Consultants, 2022

METHODOLOGY

Walker selected Affordable housing, mixed market-rate and Affordable housing, and senior Affordable housing developments based on a list of density bonus planning applications since 2006, provided by LA County.

Table 1 summarizes the key characteristics of the selected housing developments. The number of units was determined from a combination of interviews with property owners, review of property websites, and the LA County Assessor's data. The property type was determined by a combination of interviews with property owners, property websites, and the density bonus database provided by LA County. All properties are Affordable at a range of income levels (measured based on a percentage of area median income).

Table 1: Affordable, Mixed-Affordable and Market-Rate, and Affordable Senior Housing Property Characteristics

	Street Name	Property Type	Percent Affordable Units	Number of Units
Metro	Holmes Ave	Affordable Housing	100%	61
	S Normandie Ave	Senior Affordable Housing (Independent Living)[1]	100%	62
	W Imperial Hwy	Affordable Housing[2]	100%	72
	Santa Fe Ave	Affordable Housing	100%	36
	E 122nd St	Senior Affordable Housing (Independent Living)	100%	61
	S Willowbrook Ave	Affordable Housing	100%	61
	W 105th St	Senior Affordable Housing (Independent Living)	100%	74
	3rd Street	Affordable Housing[3]	100%	60
	S Atlantic Ave	Affordable Housing	100%	70
	E 85th St	Affordable Housing	100%	6

[1] 6 dedicated service enriched units for homeless seniors with chronic mental illness.
[2] 15 homes reserved for transitional-age youth with project-based vouchers from the County of Los Angeles.
[3] 11 live-work units.

South Bay	Street Name	Property Type	Percent Affordable Units	Number of Units
	S Vermont Ave	Market Rate and Affordable Housing	5%	246

West San Gabriel Valley	Street Name	Property Type	Percent Affordable Units	Number of Units
	El Molino Ave	Senior Housing (Independent, Assisted, and Memory Care)	N/A	203

Source: Walker Consultants, 2022.

The Walker team conducted vehicle counts of off-street (i.e. onsite) parking on weeknights after 10:00 p.m., a time period that parking industry research has determined represents a typical peak parking demand period for residential property. Certain property types (of the 12 identified properties) have daytime staff present, such as senior housing facilities and housing in with on-site supportive services. Therefore, Walker utilized historical aerial imagery (using Google Earth) and estimated the time of day of the imagery (using Suncalc) to conduct daytime

parking occupancy counts at these properties to confirm that the period of peak parking demand was captured for each property.

In addition to quantifying off-street parking, the Walker team conducted counts of the on-street parking surrounding each survey site, plus adjacent block faces, at the same time. The purpose of collecting on-street parking data was to ensure that parking demand generated by each multi-family development was captured completely, arguably demonstrating a more generous determination of the parking demand generated by each survey site. The Walker team reached out to each property owner to better understand the extent to which residents are parking on the street. Walker assigned on-street parking demand to the selected properties using the information gleaned from property owners along with additional methods, including the surrounding land uses, total number of units for each block and the convenience/safety of access the residential development from the on-street parking supply.

A byproduct of collecting on-street data is a measure of how full or empty the streets are in the areas surrounding the survey sites. Therefore, the results of the off-street (onsite) and on-street parking data collection are also presented.

For each property, Walker estimated the parking requirement per the Title 22 of the Los Angeles County Code. The calculations assume the property would be subject to current parking requirements per Section 22.120.080 (Parking) of the Density Bonus Ordinance in Title 22. Since the parking requirements in the Density Bonus section are typically predicated on whether the property is within ½ mile of a fixed bus route (for senior citizen housing developments) or within ½ mile of a major transit stop (for other Affordable housing developments), Walker analyzed the proximity of the properties to LA Metro bus/rail lines. Since the density bonus parking requirements are also predicated on the level of affordability relative to area median income (AMI), Walker conducted a combination of an online search and a review of LA County data for each of the properties. The Affordable properties have units restricted to various income levels, typically ranging from 30 percent of area median income (AMI) to 60 percent AMI.

RESULTS

OBSERVED PARKING DEMAND RATIOS

Table 2 summarizes the observed peak parking demand at each survey site by property type, both as a function of the number of units in each development, and as a function of the number of bedrooms in each development. The number of bedrooms was determined from a combination of interviews with property owners, property websites, and LA County Assessor's Data.

Table 2 shows the ranges of parking demand per unit and parking demand per bedroom. Again, we note that the "Peak Observed Demand" column includes vehicles that were counted as parked within the property of each survey site, plus vehicles parked on the street attributed to the survey site. As a result, the observed demand is an all-inclusive number which accounts for off-street demand and on-street demand attributed to each survey site.

In looking at the weighted averages per property type, the Affordable (non-senior) properties had a weighted average of 1.42 parked vehicles per unit and the Affordable senior properties had a weighted average of 0.59 parked vehicles per unit. The one (1) mixed-income property had 1.45 parked vehicles per unit.

Walker compared each of the property types to what Title 22 requires for density bonus projects as specified in section 22.120.080. The Title 22 ratio varies property by property as the requirement varies by level of affordability (based on percentage of AMI) and proximity to transit. In comparing the current parking requirements for Affordable developments to the ratios that we collected at survey sites, we see the density bonus parking requirements are lower than actual demand. Four (4) of the properties have units affordable to people earning less than 30 percent AMI, which have a zero-space parking requirement provided they are restricted to the target population of persons with disabilities and families who are homeless.[2] However, for senior Affordable properties and the mixed market-rate and Affordable property, we see that the density bonus parking requirements are almost identical to actual demand.

Table 2: Peak Parking Demand Ratios at Survey Sites

	Street Name	Peak Observed Demand (Parked Vehicles)	#of Occ. Units	# of Occ. Bedrms	Demand per Unit	Title 22 Req. per Unit[1]	Demand per Bedrm
Affordable (non-senior)	Holmes Ave	36	57	59	0.64	0.12	0.62
	W Imperial Hwy	75	70	96	1.07	0.37	0.78
	S Willowbrook Ave	61	55	88	1.10	0.71[2]	0.69
	3rd Street	105	59	147	1.78	0.78[3]	0.71
	S Atlantic Ave	139	67	159	2.09	N/A[4]	0.88
	E 85th St	17	6[5]	16	2.83	0.50	1.06
	Santa Fe Ave	11	34	32	0.33	0.00	0.34
	Average				1.41	0.41	0.73
	Weighted Average				1.42	0.38	0.79

[1] Title 22 requirement estimated based on available project data including unit mix, affordability levels, and proximity to transit. Requirements assume Density Bonus parking requirements (Sec. 22.120.080).

[2] Since the property is not within ½ mile of an LA Metro bus stop or rail line, it assumed property would be considered "all other projects subject to Chapter 22.120" per Sec. 22.120.080.

[3] 11 live-work units are included in the development Assumes Live-Work units have a parking requirement of 2 spaces/unit per Title 22 Sec. 22.112.070.

[4] Unit mix by bedroom count was not available. Since the property is not within ½ mile of an LA Metro bus stop or rail line, it is assumed property would be considered "all other projects subject to Chapter 22.120" per Sec. 120.080, which requires the unit mix by bedroom count.

[5] Vacancy was unable to be confirmed. Assumed 0% vacancy rate.

[2] Target populations defined in Section 50675.14(b)(3)(A) of the California Health and Safety Code

	Street Name	Peak Observed Demand (Parked Vehicles)	#of Occ. Units	# of Occ. Bedrms	Demand per Unit	Title 22 Req. per Unit[1]	Demand per Bedrm
Senior Affordable	S Normandie Ave	37	60	66	0.62	0.50	0.56
	E 122nd St	52	59	61	0.88	0.50	0.85
	W 105th St	24	72	72	0.33	0.50	0.33
	El Molino Ave	41	203	N/A	0.20	N/A[2]	N/A
	Average[3]				0.61	0.50	0.58
	Weighted Average[3]				0.59	0.50	0.57

[1] Title 22 requirement estimated based on available project data including unit mix, affordability levels, and proximity to transit. Title 22 requirements assume Density Bonus parking requirements (Sec. 22.120.080).
[2] Data was not available in terms of the level of affordability of the units, including whether the property had market-rate units. Therefore, the Title 22 parking ratio could not be calculated.
[3] Given the lack of property data available for the property on El Molino Ave, this property was excluded from the average and weighted average calculations.

	Street Name	Peak Observed Demand (Parked Vehicles)	#of Occ. Units	# of Occ. Bedrms	Demand per Unit	Title 22 Req. per Unit[1]	Demand per Bedrm
Mixed Market-Rate and Affordable	S Vermont Ave	357	246	356	1.45	1.42[2]	1.00

[1] Title 22 requirement estimated based on available project data including unit mix, affordability levels, and proximity to transit. Requirements assume Density Bonus parking requirements (Sec. 22.120.080).
[2] Since the property is not within ½ mile of an LA Metro bus stop or rail line and does not provide at least 11% very low-income housing set-aside, it is assumed property would be considered "all other projects subject to Chapter 22.120" per Sec. 22.120.080.
Source: Walker Consultants, 2022

OFF-STREET (ONSITE) AND ON-STREET OCCUPANCY

Table 3 shows the off-street parking occupancy of all the sites surveyed, as well as the surrounding on-street parking occupancy.

As shown in Table 3, the occupancy data show that there are variations in off-street and on-street occupancy across the survey sites.

Off-street occupancy summary:

- 5 sites had 49% or lower parking occupancy
- 1 site had between 50% and 69% parking occupancy
- 4 sites had between 70% and 84% occupancy
- 2 sites had 85% or higher parking occupancy

On-street occupancy summary:[3]

- 2 sites had 49% or lower parking occupancy
- 6 sites had between 50% and 69% parking occupancy
- 1 site had between 70% and 84% occupancy
- 2 sites had 85% or higher parking occupancy

Table 3: Off-Street (Onsite) and On-Street Occupancy

	Street Name	Off-Street Occupancy	On-Street Occupancy
Affordable (non-senior)	Holmes Ave	40%	58%
	W Imperial Hwy	62%	88%
	S Willowbrook Ave	46%	76%
	3rd Street	76%	N/A[1]
	S Atlantic Ave	87%	68%
	E 85th St	80%	63%
	Santa Fe Ave	41%	62%

[1] There is no on-street parking inventory surrounding the property.

	Street Name	Off-Street Occupancy	On-Street Occupancy
Senior Affordable	S Normandie Ave	74%	65%
	E 122nd St	88%	66%
	W 105th St	48%	100%
	El Molino Ave	68%	34%

	Street Name	Off-Street Occupancy	On-Street Occupancy
Mixed Market-Rate and Affordable	S Vermont Ave	84%	37%

Source: Walker Consultants, 2022

[3] 5000 East 3rd Street does not have any on-street parking surrounding the site.

DATE:	June 3, 2022
TO:	Alyson Stewart
COMPANY:	Department of Regional Planning County of Los Angeles
ADDRESS:	320 W Temple Street
CITY/STATE:	Los Angeles, CA
COPY TO:	Bruce Durbin
FROM:	Daniel Garcia, Steffen Turoff
PROJECT NAME:	LA County Residential Parking Study
PROJECT NUMBER:	37-009377.00

The following memorandum comprises Task 2.4 *Data Collection* of the referenced parking study. There were two data collection efforts conducted. The first was for market-rate multifamily developments and is the focus of this memorandum. The second was for affordable and senior multifamily housing, the results for which are provided under a separate memorandum.

FINDINGS

The primary purpose of the data collection task is to quantify parking demand at multifamily properties around the unincorporated communities of LA County, in order to observe actual parking demand ratios observed in current multifamily buildings. In analyzing the data, we found the following:

- Demand for parking varied by planning area.
    - The lowest demand per unit ratio was found in the West San Gabriel planning area with a weighted average of 1.15 parked vehicles/unit. The lowest demand per bedroom was in East San Gabriel with 0.65 parked vehicles/bedroom, closely followed by the 0.76 parked vehicles/bedroom ratio found in the Metro planning area.
    - The highest demand per unit ratio was found in the Gateway planning area with a weighted average of 1.80 parked vehicles/unit. The highest demand per bedroom was found in the Santa Clarita planning area with a 1.33 parked vehicles/bedroom ratio.
- In comparing the current parking requirements for multifamily developments per Title 22 of the Los Angeles County Code to the data that were collected at survey sites throughout the seven (7) planning areas, we see that the code requirements are higher than the current demand observed for all of the seven (7) planning areas.
- In looking at the weighted[1] average of unincorporated LA County as a whole, we see that Title 22 requires 0.47 more spaces per unit than the actual observed demand. Based on these findings, Title 22 typically requires more parking than is being used, and there are significant differences observed across the different planning areas. As such, a one-size-fits all approach to parking requirements may not be

[1] Weighted average was used as it is a more accurate measure of central tendency for this study. For example, if a survey site has 400 units and a demand ratio of 1.5, and a second site has 100 units and a demand ratio of 1.2. A simple average results in a ratio of 1.35, while the weighted average results in a ratio of 1.44. The latter is more accurate as there are more units (“weight”) in the first survey site, thus that should be a factor in the calculation.

the most suitable to serve the unincorporated communities, especially given the County, regional and State goals and priorities currently placed on housing production.

INTRODUCTION

An update of the Parking Ordinance in Title 22 warrants an analysis of current conditions using a number of sources. As such, for this portion of the study, Walker conducted parking occupancy counts at 37[2] market-rate multifamily properties across the unincorporated areas of LA County to better understand the demand for multifamily residential parking. The survey sites were located across seven planning areas:

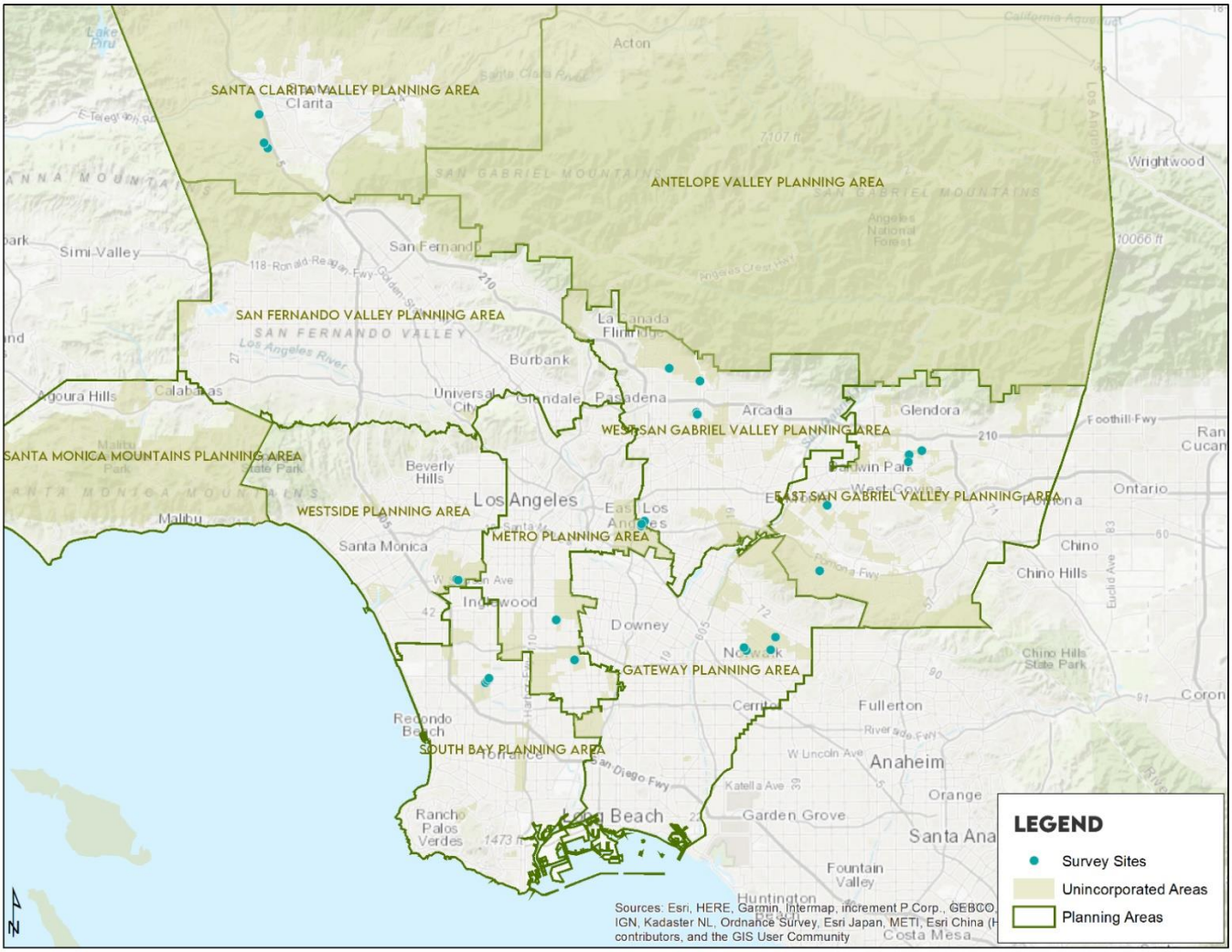
- Westside Planning Area – 4 sites
- Metro Planning Area – 12 sites
- West San Gabriel Planning Area – 2 sites
- East San Gabriel Planning Area – 4 sites
- Gateway Planning Area – 6 sites
- South Bay Planning Area – 6 sites
- Santa Clarita Planning Area – 3 sites

The seven planning areas included in this study were selected because they contain unincorporated communities that have a high concentration of multifamily residences. As a result, Coastal Islands, Santa Monica Mountains, Antelope Valley, and San Fernando Valley Planning Areas were not included.

Figure 1 illustrates the boundaries of the planning areas as well as the general locations of the survey sites.

[2] Walker identified 43 properties total in the study area; however, three (3) were inaccessible at the time of data collection, thus they were omitted from the analysis. Two additional (2) properties were removed because one consisted of affordable housing units, and the other was no longer functioning as a residential property. One (1) other property, a mixed-use development, was analyzed separately from the 37.

Figure 1: Survey Sites Across Planning Areas



Source: Walker Consultants, 2022

METHODOLOGY

The Walker team conducted vehicle counts of off-street (i.e., onsite) parking on weeknights after 10 p.m., a time period that parking industry research has determined represents typical peak parking demand for residential property. In addition to counting off-street parking, counts of the on-street parking surrounding each survey site, plus adjacent block faces were also conducted at the same time. The purpose of collecting on-street parking was to ensure that parking demand generated by each multi-family development was captured completely, arguably demonstrating a more generous determination of the parking demand generated by each survey site.

A byproduct of collecting on-street data is a measure of how full or empty the streets are in the areas surrounding the survey sites. Therefore, the results of the off-street (onsite) and on-street parking are also presented.

RESULTS

OBSERVED PARKING DEMAND RATIOS

Table 1 summarizes the observed peak parking demand at each survey site by planning area, both as a function of the number of units in each development, and as a function of the number of bedrooms in each development.

Table 1 shows the ranges of parking demand per unit and parking demand per bedroom as captured in the seven planning areas of the study. Again, we note that "Peak Observed Demand" column includes vehicles that were counted as parked within the property of each survey site, plus vehicles parked on the street attributed to the survey site, and in some instances where survey sites contained individual, closed garage spaces, an assumption of number of vehicles parked within those garages was made based on the observed on-site parking occupancy. As a result, the observed demand is an all-inclusive number which accounts for off-street demand and on-street demand attributed to each survey site.[3]

In looking at the weighted averages per planning area, the lowest demand per unit ratio was found in the West San Gabriel planning area with a weighted average of 1.15 parked vehicles per unit. The lowest demand per bedroom was in East San Gabriel with 0.65 parked vehicles per bedroom, closely followed by the 0.76 parked vehicles per bedroom ratio found in the Metro planning area.

The highest demand per unit ratio was found in the Gateway planning area with a weighted average of 1.81 parked vehicles per unit. The highest demand per bedroom was found in the Santa Clarita planning area with a 1.33 parked vehicles per bedroom ratio.

[3] It is worth noting that minimum parking requirements dictate the amount of off-street parking provided. Our including the number of cars parked at the curb reflects our intent to quantify the entire number of vehicles generated per unit, both in parking lots and garages, and on the street, for a conservatively high calculation of parking demand per dwelling unit.

Table 1: Peak Parking Demand Ratios at Survey Sites

	Block Location	Peak Observed Demand (Parked Vehicles)	Number of Occupied Units	Number of Occupied Bedrooms	Demand per Unit	Demand per Bedroom
Westside	4800 W Slauson Ave	17	17	19	1.00	0.89
	5700 S Fairfax Ave	149	80	105	1.86	1.42
	4700 W Slauson Ave	74	65	66	1.14	1.12
	4800 W Slauson Ave	12	8	12	1.50	1.00
	Average				1.38	1.11
	Weighted Average				1.48	1.25

	Block Location	Peak Observed Demand (Parked Vehicles)	Number of Occupied Units	Number of Occupied Bedrooms	Demand per Unit	Demand per Bedroom
Metro	9200 Hooper Ave	5	5	13	1.00	0.38
	9200 Hooper Ave	6	5	13	1.20	0.46
	9200 Belhaven Street	14	5	13	2.80	1.08
	9200 Belhaven Street	8	5	13	1.60	0.62
	9200 Belhaven Street	8	5	13	1.60	0.62
	9200 Belhaven Street	8	5	13	1.60	0.62
	2200 E El Segundo Blvd	33	61	98	0.54	0.34
	2200 E El Segundo Blvd	33	20	22	1.65	1.50
	2100 E El Segundo Blvd	29	13	46	2.23	0.63
	100 N Mednik Ave	57	24	48	2.38	1.19
	200 N Kern Ave	88	33	105	2.67	0.84
	300 Mednik Ave	51	51	51	1.00	1.00
	Average				1.69	0.77
	Weighted Average				1.47	0.76

	Block Location	Peak Observed Demand (Parked Vehicles)	Number of Occupied Units	Number of Occupied Bedrooms	Demand per Unit	Demand per Bedroom
West San Gabriel	300 S Sierra Madre	17	13	10	1.31	1.70
	400 S Sierra Madre	22	21	24	1.05	0.92
	Average				1.18	1.31
	Weighted Average				1.15	1.15

	Block Location	Peak Observed Demand (Parked Vehicles)	Number of Occupied Units	Number of Occupied Bedrooms	Demand per Unit	Demand per Bedroom[1]
East San Gabriel	1500 N Orange Ave	32	53	53	0.60	0.60
	19500 E Cienega Ave	172	78	0	2.21	-
	20300 E Arrow Hwy	149	96	232	1.55	0.64
	19500 E Cypress Street	18	11	22	1.64	0.82
	Average				1.50	.69
	Weighted Average				1.56	.65

Notes: 1. The weighted average for Demand per Bedroom is based on three survey locations given the availability of the information.

	Block Location	Peak Observed Demand (Parked Vehicles)	Number of Occupied Units	Number of Occupied Bedrooms	Demand per Unit	Demand per Bedroom
Gateway	11700 Louis Ave	51	20	40	2.55	1.28
	14600 Leffingwell Rd	26	15	32	1.73	0.81
	11500 Obert Ave	24	16	24	1.50	1.00
	11500 Obert Ave	20	13	22	1.54	0.90
	10600 Colima Rd	83	50	82	1.66	1.01
	13200 Meyer Rd	18	9	18	2.00	1.00
	Average				1.83	1.00
	Weighted Average				1.80	1.02

	Block Location	Peak Observed Demand (Parked Vehicles)	Number of Occupied Units	Number of Occupied Bedrooms	Demand per Unit	Demand per Bedroom
South Bay	3300 Marine Ave	64	60	84	1.07	0.76
	15000 Lemoli Ave	37	16	32	2.31	1.16
	15000 Lemoli Ave	37	16	32	2.31	1.16
	15000 Lemoli Ave	98	31	47	3.16	2.11
	14700 Chadron Ave	35	32	48	1.09	0.73
	3100 W 145th St	17	8	24	2.13	0.71
	Average				2.01	1.10
	Weighted Average				1.77	1.08

	Block Location	Peak Observed Demand (Parked Vehicles)	Number of Occupied Units	Number of Occupied Bedrooms	Demand per Unit	Demand per Bedroom
Santa Clarita	25300 The Old Rd	338	469	716	0.72	0.47
	24900 Constitution Ave	538	288	86	1.87	6.26
	25300 Silver Aspen Way	343	217	113	1.58	3.03
	Average				1.39	3.25
	Weighted Average				1.25	1.33

Source: Walker Consultants, 2022

Unincorporated County Total:

- Demand per Unit = 1.41 (Weighted Avg.)

COMPARISON OF DATA COLLECTED TO CURRENT CODE

In a previous memorandum (Task 2.1 and 2.2), Walker presented a comparison of the amount of parking that the County currently requires for multifamily housing and ratios researched for and published in the Urban Land Institute's (ULI) Shared Parking 3rd Edition. In comparing the blended[4] ratios of both, we saw that the County's code currently requires 0.25 more parking spaces than ULI's industry accepted parking ratios. It is important to note that the ULI parking ratios are based on suburban, autocentric parking rates, meaning that even by suburban standards, the current County of Los Angeles ratios are high.

[4] A blended ratio is a combined ratio which includes the requirements for: studio, 1-bedroom, 2-bedroom, 3+ bedroom, and guest parking requirements.

In comparing the current parking requirements for multifamily to the ratios that we collected at survey sites throughout the seven (7) planning areas, we see the Title 22 code requirements are higher than actual demand demonstrates for all of the planning areas. Table 2 shows the comparisons.

Table 2: Comparison of Ratios, Current Code vs. Data Collected (Demand per Unit)

Planning Area	Los Angeles County Code (LACC)	Data Collected by Planning Area (DCPA)	Difference (LACC – DCPA =)
Westside	1.875	1.48	0.395
Metro		1.47	0.405
West San Gabriel		1.15	0.725
East San Gabriel		1.56	0.315
Gateway		1.80	0.075
South Bay		1.77	0.105
Santa Clarita		1.25	0.625
Unincorporated LA County Overall		1.41	0.465

Source: Walker Consultants, 2022

Looking at the weighted average of unincorporated LA County as a whole, we see that Title 22 requires 0.47 (0.465) more spaces per unit than the actual observed demand. The findings from Table 2 also show that there are differences in utilization across the different planning areas. As such, a one-size-fits all approach to parking requirements may not be the most suitable to serve all the unincorporated communities, especially if the goal is to produce more housing.

OFF-STREET (ONSITE) AND ON-STREET PARKING OCCUPANCY

Table 3, on the following page, shows the off-street parking occupancy at all of the sites surveyed, as well as the surrounding on-street parking occupancy. An 85% utilization rate is the typical target for on-street parking spaces within most parking systems, in order to ensure the majority of spaces are being utilized while adequate availability remains for those seeking a space. For on-street parking supplies, a utilization above 85% is considered effectively full. For off-street parking, a 90-95% utilization rate is effectively full.

As shown in Table 3, the occupancy data show that there are variations in off-street and on-street occupancy across the survey sites. For example, we see that there are some survey sites where parking was less than 50% occupied while others were 100% occupied. In some cases, the results were in between. There does not appear to be a consistent level of occupancy among the survey sites even within the same planning area. However, we do see that for off-street occupancies there are more sites observed at 70% or higher occupancies than less than 70% occupancies.

Off-Street Occupancy Summary

- 4 sites had 49% or lower parking occupancy
- 9 sites had between 50% and 69% parking occupancy
- 7 sites had between 70% and 84% occupancy
- 17 sites had 85% of higher parking occupancy

For on-street parking we see a similar breakdown.

On-Street Occupancy Summary

- 8 sites had 49% or lower parking occupancy (it must be noted that 2 sites in the Santa Clarita planning area did not have on-street parking)
- 11 sites had between 50% and 69% parking occupancy
- 2 sites had between 70% and 84% occupancy
- 16 sites had 85% or higher parking occupancy

Table 3: Off-Street (Onsite) and On-Street Occupancy

	Location	Off-Street Occupancy	On-Street Occupancy
Westside	4800 W Slauson Ave	47%	30%
	5700 S Fairfax Ave	86%	64%
	4700 W Slauson Ave	93%	30%
	4800 W Slauson Ave	92%	30%

	Location	Off-Street Occupancy	On-Street Occupancy
Metro	9200 Hooper Ave	67%	56%
	9200 Hooper Ave	83%	56%
	9200 Belhaven Street	100%	123%*
	9200 Belhaven Street	100%	96%
	9200 Belhaven Street	67%	96%
	9200 Belhaven Street	50%	96%
	2200 E El Segundo Blvd	34%	85%
	2200 E El Segundo Blvd	94%	85%
	2100 E El Segundo Blvd	108%*	85%
	100 N Mednik Ave	98%	50%
	200 N Kern Ave	68%	50%
	300 Mednik Ave	34%	50%

Note: *In some instances there were more vehicles parked than marked parking stalls, thus the resulting 100%+ occupancy.

West San Gabriel	Location	Off-Street Occupancy	On-Street Occupancy
	300 S Sierra Madre	42%	97%
	400 S Sierra Madre	85%	75%

East San Gabriel	Location	Off-Street Occupancy	On-Street Occupancy
	1500 N Orange Ave	69%	35%
	19500 E Cienega Ave	94%	71%
	20300 E Arrow Hwy	62%	55%
	19500 E Cypress Street	76%	67%

Gateway	Location	Off-Street Occupancy	On-Street Occupancy
	11700 Louis Ave	96%	61%
	14600 Leffingwell Rd	68%	36%
	11500 Obert Ave	100%	100%
	11500 Obert Ave	88%	100%
	10600 Colima Rd	69%	45%
	13200 Meyer Rd	72%	53%

	Location	Off-Street Occupancy	On-Street Occupancy
South Bay	3300 Marine Ave	72%	108%*
	15000 Lemoli Ave	79%	102%*
	15000 Lemoli Ave	77%	102%*
	15000 Lemoli Ave	86%	102%*
	14700 Chadron Ave	100%	85%
	3100 W 145th St	69%	50%

Note: *In some instances there were more vehicles parked than marked parking stalls, thus the resulting 100%+ occupancy.

	Location	Off-Street Occupancy	On-Street Occupancy
Santa Clarita	25300 The Old Rd	87%	-*
	24900 Constitution Ave	85%	89%
	25300 Silver Aspen Way	78%	-*

Note: *In some instances properties did not have street parking.

Source: Walker Consultants, 2022

MEMORANDUM

DEVELOPER AND LA COUNTY STAFF INTERVIEW SUMMARY

37-009377.00

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DATE:	April 26, 2022
TO:	Alyson Stewart
COMPANY:	Department of Regional Planning, County of Los Angeles
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CITY/STATE:	Los Angeles, CA
COPY TO:	Bruce Durbin
FROM:	Chrissy Mancini Nichols, Tania Schleck, Bernard Lee, Steffen Turoff
PROJECT NAME:	LA County Residential Parking Study
PROJECT NUMBER:	32-009377.00

The following memorandum comprises Task 3.3 Interview Summary Memorandum of the referenced parking study. Walker conducted eight (8) one-on-one interviews with developers of multifamily housing and County staff, with a focus on their experiences with existing LA County minimum parking requirements for market-rate and Affordable multi-family housing and mixed-use developments and discussed solutions for streamlining site plan reviews related to parking.

OUTREACH PLAN

This section discusses Walker's outreach plan and outreach efforts.

OUTREACH OBJECTIVES

The key outreach objectives are as follows:

- Inform key stakeholders within the development community and appropriate County staff about the study and why it is being conducted.
- Understand the current barriers that the parking requirements for multifamily land uses as set forth in Los Angeles County's Title 22 Ordinance imposes on developing new multi-family housing and opportunities to modify policies to promote the development of new housing.
- Obtain input from stakeholders within the development community that would be affected by changes to parking regulations to help inform the outcomes of the study, with the ultimate goal of constructing more housing.

OUTREACH PROCESS

Walker reached out to 26 developers and nine (9) LA County staff members to interview and asked participants to fill out a Doodle poll with availability. A second request was sent to the list of developers and LA County staff members. Based on the response rate, Walker interviewed five (5) developers during four (4) meetings and four (4) LA County staff members via video conference.

DEVELOPERS

Developers were asked to complete a brief online survey prior to the interview to learn more about their work and experience with LA County's parking requirements. Developers were also sent a PowerPoint presentation prior to the interview providing background and study goals, study purpose, and discussion questions related to the current regulations, shared parking, constraints, demand management, and issues and opportunities. The PowerPoint presentation is included as an attachment to this memo.

LA COUNTY STAFF

LA County staff were provided a separate PowerPoint presentation prior to the interviews, which included the study purpose and discussion questions related to current regulations, constraints, demand management, and opportunities. The PowerPoint presentation is included as an attachment to this memo.

DEVELOPER INTERVIEW KEY FINDINGS

Walker conducted four (4) interviews with developers, including a range of market rate and Affordable housing developers as well as representatives from industry organizations.

SURVEY RESULTS

As mentioned in the Outreach Process section, developers were asked to complete a brief online survey prior to the interview. A total of four (4) respondents responded to the survey. This section includes a summary of the survey results.

QUESTION 1 – WHERE HAVE YOU DEVELOPED AFFORDABLE, MARKET-RATE, AND MIXED-USE DEVELOPMENTS (SELECT ALL THAT APPLY)?

One (1) respondent indicated that they have developed properties in unincorporated areas of LA County, three (3) respondents indicated that they have developed properties in incorporated areas of LA County, one (1) respondent indicated that they have developed properties outside of California, and one (1) respondent indicated "none of the above."

QUESTION 2 – DO YOU HAVE PLANS TO DEVELOP AFFORDABLE, MARKET-RATE MULTI-FAMILY AND MIXED-USE PROJECTS?

Three (3) respondents indicated that they do not have plans to develop the project types referenced in the question and one (1) respondent indicated that they do have plans to develop the project types listed in the question.

QUESTION 3 – ON A SCALE OF 1-5, WITH 5 BEING THE MOST BURDENSOME AND 1 BEING THE LEAST BURDENSOME, HOW WOULD YOU RATE YOUR EXPERIENCE WITH LA COUNTY'S MINIMUM PARKING REQUIREMENTS WHEN DEVELOPING AFFORDABLE, MARKET-RATE, AND MIXED-USE PROJECTS?

Four (4) respondents provided a rating in answer to this question, with an average rating of 3.5.

QUESTION 4 – REGARDING YOUR EXPERIENCE WITH PARKING REQUIREMENTS FOR NEW DEVELOPMENT, HAS IT ONLY BEEN WITH LA COUNTY'S REQUIREMENTS AS REQUIRED IN THE PLANNING AND ZONING CODE UNDER TITLE 22, OR HAVE OTHER REGULATIONS SUCH AS OVERLAY ZONES, STATE OF CALIFORNIA REGULATIONS, DENSITY BONUSES, OR SIMILAR COME INTO PLAY IN DETERMINING HOW MUCH PARKING YOU PROVIDE? PLEASE EXPLAIN.

The following responses were provided:

- "all of the above…much unincorporated County areas are way, way outside any possible TPA (transit priority area), thus State Density Bonus parking provisions less relevant. Transit service density generates tenant parking demand in submarket, which then is echoed by capital partner req'ts."
- "We frequently utilize State Density Affordable Housing Bonuses for calculating parking needs."
- "Parking minimums are an issue for overall housing development. In the past, SCANPH has been most concerned about ways to help Affordable housing developers gain a leg up above their market rate competitors. Last year, we opposed a bill that took away parking minimums for all residential development because we believed it would undo incentives set up for Affordable housing developers."

- "Building code is an issue, in terms of dictating acceptable dimensions, turning radii, etc."

QUESTION 5 – DO YOU AGREE OR DISAGREE WITH THIS STATEMENT: LA COUNTY'S PARKING REQUIREMENTS CREATE BARRIERS TO DEVELOPING AFFORDABLE, MARKET-RATE MULTI-FAMILY, AND MIXED-USE PROJECTS?

All four (4) respondents indicated that they agree with this statement.

CHALLENGES OF CURRENT PARKING REQUIREMENTS

Developers cited the following key challenges to minimum parking requirements:

- Parking requirements increase the amount of land needed to build development projects. Small development projects can become economically infeasible if a parking deck or multi-story configuration is needed.
- One of the most significant cost impacts of parking requirements is when requirements result in the need to build additional levels of parking. The need for one additional parking space can result in the need to build an additional parking level, resulting in an increase of millions of dollars to the project budget.
- Project site constraints, especially on infill sites, have a significant impact on the extent to which projects can meet the parking requirements on-site and the cost of meeting the requirements on-site.
- Parking requirements impact affordability because they often result in the need to build at the high end of the market, thus resulting in the need to charge higher rents.
- Parking requirements can lengthen the amount of time projects are reviewed in the development process. Zoning-related parking issues can result in lengthy reviews and more staff time to conduct the reviews.

POTENTIAL PARKING ORDINANCE SOLUTIONS

Developers offered the following potential solutions related to the parking ordinance update:

Eliminate Parking Requirements/Maximum Requirements:

- Eliminating parking requirements increases the zoning envelope, allowing developers to build more residential units if they choose, depending on market conditions.
- One developer suggested eliminating parking requirements and requiring those who provide parking to pay a fee that would fund transportation demand management (TDM) improvements.
- Parking maximums can present challenges with obtaining financing on certain projects, especially if the maximum parking ratio is significantly lower than what a lender would prefer to finance. A better alternative could be to provide density concessions for developers who choose to build fewer parking spaces.

Unbundle Parking

- Unbundling the cost of parking from the cost of the residential unit allows for residents to only pay for the amount of parking they want, thus potentially saving money on rent.
    - One developer suggested that the combination of minimum parking requirements and requirements to unbundle parking is too burdensome for the developer. If a developer is required to build parking spaces and unbundle parking, they need assurances that they can include the cost of the space in housing rents in order to recoup costs associated with constructing parking spaces.

In-Lieu Fee

- Charging a fee in-lieu of providing the required number of parking spaces (parking in-lieu fees) is a potential solution allowing for the reduction or elimination of parking requirements.

- Parking in-lieu fees can provide more flexibility for developers. Especially if paying an in-lieu fee would avoid the need to build subterranean parking, developers may be more likely use the in-lieu fee option.
- For the in-lieu fee revenue collected, there needs to be a clear implementation timeline and funding allocation to communicate to residents living near a new project.
- In-lieu fees are context sensitive. If a fee is set at too high of a rate, developers may elect to build parking instead of paying a fee. Market forces also impact the potential for an in-lieu fee. Certain markets require that more parking is built on site; making it unlikely developers would use an in-lieu fee option.
- Parking in-lieu fees typically fund improvements made outside of a project site. Developers may prefer to fund on-site improvements that directly benefit their residents.

Shared Parking

- Shared parking is a potential solution to reduce the number of parking spaces needed, but there is market resistance to sharing commercial and residential parking. Both commercial and residential tenants may want reserved parking or assurances that parking will be available. Some commercial uses may not be compatible to share with residential uses, such as a bar with higher nighttime parking demand.
- There is a significant amount of underutilized parking in existing development projects. The overall percentage of total housing units that are part of new construction is relatively small. Existing underutilized parking presents an opportunity for more housing development.

Factors That Can Influence Parking Demand

- Providing bicycle parking in-lieu of vehicle parking can help alleviate the development pressure of a site. One developer worked on a project in incorporated Los Angeles on a constricted site that would have been undevelopable or would have needed to be built with fewer units without the bicycle parking reduction allowances.
- One developer suggested that the ability to have unattended tandem parking spaces would be beneficial. Parking lifts and automated parking can make unattended tandem spaces feasible.
- Allowing for provision of Transportation Demand Management amenities can encourage developers to build less parking.
- Neighborhood walkability contributes significantly to whether someone will choose to drive. Having amenities close by can reduce residents' reliance on single occupancy vehicles (SOVs).
- Proximity to transit can also reduce reliance on SOVs. However, the quality of the transit is important. Not all transit stops serve many destinations or have frequent enough transit service to serve as a viable alternative to driving. Developers suggested that in some cases, neighborhood amenities (grocery store, pharmacy, etc.) had more influence on the need for parking than transit. Especially if transit is low-quality and does not reach many destinations.
- One developer suggested that if a development is constructed near transit, and transportation amenities are provided (e.g. scooters or carshare), less parking could be provided, but it is very context-dependent. The developer cited a Transit Oriented Communities (TOC) project in the City of Los Angeles built with zero parking spaces. The lack of parking requirement facilitated the construction of more affordable units (not Affordable units, but units with lower market-rate rents). The property includes small units and studios with lower absolute rents. Project lenders did not have significant concerns with the lower rents and lack of parking because the value proposition made sense on a price per square foot basis and the property is not marketed as a luxury residential development.

- One developer pointed out that Affordable housing residents may have car dependent jobs (longer commutes or different hours/schedules), that may have off-peak transit hours making transit infeasible.

OTHER CONSIDERATIONS

Developers cited the following additional considerations regarding the parking ordinance update and housing affordability:

Flexibility

- Flexibility is important to developers in how they satisfy the parking requirement. At the same time, the parking ordinance should be clearly articulated, defined, understood, and applied.

Market Pressures

- Even if parking requirements are lowered or eliminated, developers may still elect to build more parking. Sometimes the amount of parking provided is driven by investors.
- The development market impacts the amount of parking that is required to serve a development. Developments in certain locations are marketed toward clientele that would be willing to have their parking unbundled and to use car share. Developments in other locations may need to be built with more parking spaces to accommodate the needs of the potential residents.
- There can be a relationship between the rent of a housing unit and the amount of parking that is needed. Higher-end luxury apartments often need to provide more parking to be marketable. Affordable housing units often need fewer parking spaces, as there tends to be lower rates of car ownership and higher transit usage for these residents. However, one developer pointed out that Affordable housing residents may have car dependent jobs (longer commutes or different hours/schedules), that may have off-peak transit hours making transit infeasible.

Approval Process

- The development approval process can impact the feasibility of development projects. Discretionary approvals often take longer time and have less predictability for developers. Elongated schedules, complexity in the process, and uncertain outcomes create risks that can cause developers to forego a project, or concern lenders and investors as to whether to support a project. Elongated schedules can also generate greater community opposition or, far worse, frivolous litigation. The result can be development projects, and residential units, that do not get built.[1]
- Developers cited experience with the City of Los Angeles Transit Oriented Communities (TOC) Program. One developer mentioned that the TOC program has enabled developments to provide residential units at a lower cost because developers avoid the need to build as much parking. Another developer found that projects built more parking than is required per the TOC ordinance. Developers that are building both Affordable and market-rate development projects need to subsidize the Affordable units with higher market rate rents. The residents who live in units with higher market rents may require more parking, driving up the parking ratio.

Design Standards

[1] This finding was mentioned by developers and expanded upon in the Policy Brief: *By Transit, By-Right: Impacts of Housing Development Approval Processes on Transit-Supportive Density.* By Michael Manville, Nolan Gray, Shane Phillips, and Paavo Monkkonen. January 2022. University of California Institute of Transportation Studies.

- Regarding adjusting parking dimension requirements, one developer mentioned that vehicles are getting larger and abusing compact stall restrictions.

On-Street Parking Policies

- When considering updates to the off-street parking requirements, it is important to consider on-street parking policy. On-street parking is part of the solution to maximize space for parking.

LA COUNTY STAFF INTERVIEW KEY FINDINGS

Walker conducted four (4) interviews with LA County staff. The LA County staff who were interviewed include staff from the LA County Department of Regional Planning and Department of Public Works' Building and Safety. Staff interviewed have experience with residential housing development in LA County.

CURRENT LA COUNTY CODE AND DEVELOPMENT CONDITIONS

LA County staff offered the following considerations regarding current parking requirements and residential development in the LA County Code:

- Particularly for market-rate development projects, parking requirements are an impediment to development and often result in fewer units being built.
- Affordable housing developers often build fewer parking spaces to reduce development costs. The LA County Code currently allows for parking reductions for Affordable housing development as part of the density bonus program. Applicants often ask for further parking reductions. If applicants offer greater affordability than the threshold, greater parking reductions will be allowed. Developers are required to provide a letter that justifies the request financially.
- Developers have stated in parking waiver requests that they cannot build more units because they must build underground parking.
- Residential housing in which 100 percent of the units are Affordable are approved under a ministerial process with no public hearing.
- With ministerial approvals, LA County staff lacks the mechanism to verify implementation of transportation demand management (TDM) improvements or unbundling of parking from the cost of the rental unit.
- Developers often include Affordable units in development projects in order to obtain density bonuses, setback reductions, and parking requirement reductions.
- LA County has an inclusionary housing requirement, requiring developers to provide Affordable units for developments with five (5) or more units and that are located in certain sub-markets in the County.
    - Rental housing development in one of these submarket areas: Coastal South Los Angeles, San Gabriel Valley, or Santa Clarita Valley.
    - For-sale housing development in one of these submarket areas: Antelope Valley (excluding condos), Coastal South Los Angeles, East Los Angeles/Gateway, San Gabriel Valley, Santa Clarita Valley, or South Los Angeles (excluding condos).

POTENTIAL PARKING ORDINANCE SOLUTIONS

LA County staff offered the following potential solutions related to the parking ordinance update:

Code Flexibility

- Some developers are likely to take advantage of parking in-lieu fees for mobility and neighborhood improvements. One staff member expressed concern that with in-lieu fees, the cost of the fee will be passed onto the tenants.

- The process is currently discretionary to permit waivers such as reductions to the required back-up space (26 feet), allowing for compact parking spaces, or allowing for uncovered parking spaces. Adding more leniency in the code could be beneficial.
- One staff member suggested to allow for the use of mechanical stackers to promote flexibility.
- Unbundling the cost of parking from the cost of the residential unit is a potential solution. However, one staff member suggested that unbundling parking might encourage residents to park on the street instead.

Criteria

- Criteria cited to reduce parking included proximity to transit, walkability to places of interest, proximity of transit to employment centers, provision of nearby bicycle facilities.
    - One staff member indicated that a neighborhood's walkability is even more important than transit access in terms of reducing demand for parking. Some community members in rail transit-served areas do not use transit because they worry about safety walking to and from the stations and riding on trains.
    - One staff member suggested offering car share at LA Metro park and rides.

OTHER CONSIDERATIONS

LA County staff offered the following other considerations related to the parking ordinance and housing affordability:

- Even if parking requirements are reduced or eliminated, developers may provide more parking than is required due to market reasons.
- The parking ordinance should be streamlined as to not extend the length of time of the development review process. If additional layers of review and approvals are added to the code, the planner reviewing will need more time to complete the review.
- If parking is reduced, it is important for local residents to understand their mobility options. Parking reductions must be replaced by something tangible.
- Parking spillover from residential development onto on-street parking supply is a concern of residents when parking reductions are requested. One staff member suggested there may be community support for on-street parking regulations near new projects.
- Supportive housing typically does not require parking for residents, but developers typically provide parking for case workers and guests.

CONCLUSION

Based on the Task 3.3 interview summary analysis, the following key themes emerged:

- Minimum parking requirements can have a significant impact on project budgets. One of the most significant cost impacts of parking requirements is when requirements result in the need to build additional levels of parking.
- However, even if parking requirements are lowered or eliminated, developers may still elect to build more parking. Sometimes the amount of parking provided is driven by investors.
- The development approval process can impact the feasibility of development projects. Discretionary approvals often take longer time and have less predictability for developers.

- Developers and staff suggested flexibility in parking requirements. For example, flexibility could be offered in parking stall dimensions, allowances for mechanical parking, and charging a fee in-lieu of providing the required parking spaces.
- Criteria cited to reduce parking included proximity to transit, walkability to places of interest, proximity of transit to employment centers, provision of nearby bicycle facilities.

MEMORANDUM

PARKING PROGRAM CASE STUDY ANALYSIS

37-009377.00

DATE:	January 20, 2022
TO:	Alyson Stewart
COMPANY:	Department of Regional Planning County of Los Angeles
ADDRESS:	320 W Temple Street
CITY/STATE:	Los Angeles, CA
COPY TO:	Bruce Durbin
FROM:	Tania Schleck, Steffen Turoff
PROJECT NAME:	LA County Residential Parking Study
PROJECT NUMBER:	37-009377.00

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The following memorandum comprises Task 4.2 Parking Program Case Study Analysis of the referenced parking study. This memo includes an analysis of the parking policies of eight jurisdictions with high costs of housing that have enacted reforms for their parking requirements for multi-family housing. These cities were selected for review based on our preliminary understanding of material efforts to enact reforms in this area. Parking policies from the following jurisdictions were analyzed as part of this task:

- Santa Monica, CA
- San Francisco, CA
- Berkeley, CA
- Los Angeles, CA
- San Diego, CA
- Oakland, CA
- Portland, OR
- Minneapolis, MN

SUMMARY OF CASE STUDY PARKING POLICIES

Table 1 on the following page summarizes the key elements evaluated as part of this analysis for each of the selected cities.

The following elements were analyzed in each of the selected cities:

- Whether the City eliminated or reduced parking requirements for residential development, and the polic(ies) enacted.
- Whether the City has instituted parking maximums for residential development.
- Whether the City requires that the cost of parking is sold separately from the cost to own or buy a housing unit (“unbundling”).
- Whether the City requires developers to build bicycle parking or allows for reductions in automobile parking requirements for the provision of bicycle parking spaces.
- Whether the City requires developers to build car share parking spaces or allows for reductions in automobile parking requirements for the provision of car share parking spaces.
- Whether the City has a transportation demand management (TDM) ordinance that requirements multi-family developments to provide certain TDM measures, or whether the City allows reduction in required automobile parking for the provision of TDM provisions.

Table 1: Summary of Case Study Multi-Family Parking and Transportation Policies

	Multi-Family Reduced or Eliminated Parking Minimums	Multi-Family Parking Maximums	Requires Unbundling Parking Cost from Housing Cost[1]	Bicycle Parking Required	Car Share Parking Required	TDM Required as part of Ordinance
Santa Monica	Downtown – no minimums Near transit – reduced minimums	Downtown - Yes	Certain areas of the City – Yes	Yes	No	Yes
San Francisco	No minimums	Yes	Yes	Yes	Yes	Yes
Berkeley	No minimums except for Hillside properties	Near transit - yes	Yes	Yes	Yes	Yes
Los Angeles	Downtown – no minimums (pending) Cornfield Arroyo Seco Plan – no minimums Adaptive Reuse projects – no minimums	No	Cornfield Arroyo Seco Plan - Yes	Yes	No	Pending
San Diego	Downtown or near transit – no minimums	Downtown – yes	Downtown or near transit – Yes	Yes	No	Near transit - Yes
Oakland	Downtown or certain zones – no minimums	Downtown or certain zones – yes	Yes	Yes	Downtown – Yes	No
Portland	Downtown – no minimums Near transit – reduced minimums	When 25% or more of parking is surface parking – Yes	No	Yes	No	Near transit – Yes
Minneapolis	No minimums	Yes	No	Yes	No	Yes

[1] Unbundling of parking for housing refers to charging for parking separate from the cost to rent or by the housing unit.
Source: Walker Consultants, 2021.

This analysis includes the parking policies that focus on the downtown core or central business district (CBD) of each community. Given that LA County does not have well-defined CBDs or town centers, these policies are likely not applicable to all LA County communities. However, select policies could be applied to transit oriented development (TOD) districts or other neighborhoods with high density and frequent transit service.

SANTA MONICA

POLICY(IES) ENACTED

ELIMINATION OF PARKING MINIMUMS AND INSTITUTION OF PARKING MAXIMUMS DOWNTOWN

The Santa Monica City Council unanimously approved the Downtown Community Plan (DCP) on July 25, 2017. The DCP is a roadmap guiding the evolution of Downtown Santa Monica, a 229-acre area (40 blocks) identified by the City's Land Use and Circulation Element (LUCE). The DCP is the central planning tool that guides the future of Downtown Santa Monica over a 15-year period.

Seven key elements anchor the DCP:[1]

- ***Housing is strongly encouraged to accommodate residents of all incomes, family situations, and stages of life.***
- *New and enhanced public spaces will add to Downtown's attractiveness.*
- *Expanded cultural, entertainment, and artistic offerings will add to Downtown's identity as the city's cultural heart.*
- *Preservation of historic and character-defining buildings will help maintain Downtown's identity as new infill projects take shape.*
- *Downtown's economic engine will be supported to maintain services and resident's high quality of life.*
- *Improvements to the mobility network will make getting around town efficient and safe.*
- *A diverse range of new uses, activities, and preferred services will support the emerging Downtown neighborhood and promote social connectedness and community wellbeing.*

The DCP incentivizes housing production through a streamlined administrative approval process for projects that meet set size, height, and design standards. Additionally, 20-30 percent of units (depending on building height) in multi-family developments are required to be Affordable.

The DCP included an elimination of parking requirements for all new development in the DCP area and implementation of parking maximums for the DCP area. Prior to eliminating the parking requirement in the DCP, on average, one or more parking spaces was required for each dwelling unit.

Table 2, on the following page, summarizes the City's residential parking requirements after the DCP parking regulations were passed. Reduced parking requirements are allowed for those areas in the immediate vicinity of high-quality transit stations or stops and the Memorial Park Specific Plan area (these areas are designated as Parking Overlay 1). The DCP area has no parking minimums, only parking maximums.

[1] *Santa Monica City Council Approves Downtown Community Plan with Ambitious Affordable Housing Incentives and Requirements.* July 26, 2017. https://www.santamonica.gov/press/2017/07/26/santa-monica-city-council-approves-downtown-community-plan-with-ambitious-affordable-housing-incentives-and-requirements

Table 2: City of Santa Monica Off-Street Parking Requirements for Residential Uses

Housing Type	Parking Minimums (spaces/unit, unless otherwise noted)			Parking Maximums (spaces/unit, unless otherwise noted)
	Citywide	Parking Overlay 1	DCP	DCP
Multi-Unit Dwelling (including duplexes and Single-Room Occupancy Housing)				
Guest	0.2	0.1	0	0.07
Studio	1	1	0	0.5
1 bedroom[1]	1.5	1	0	0.5
2+ bedrooms[1]	2	1.5	0	1
Single Unit Dwelling	2	2	0	2
Second Dwelling Unit	1	1	0	N/A
Deed Restricted Affordable (Duplex, Multi-Unit Dwelling, and Single-Room Occupancy Housing)				
Studio	0.5	0.5	0	0.03
1 bedroom	0.75	0.5	0	0.25
2+bedrooms	1	1	0	0.25
Senior Citizen Multiple-Unit Residential				
Unit	0.5	0.5	0	0.5
Guest	0.2	0.17	0	0.17
Low and moderate income units	0.25	0.25	0	0.25
Senior Group Residential				
Unit	0.5	0.5	0	0.5
Guest	0.2	0	0	N/A
Deed restricted Affordable	0.25	0.25	0	0.25
Group Residential (per bed)	0.5	0.5	0	0.5
Congregate Housing (per bed)	0.2	0.2	0	0.2
Elderly and Long-Term Care (per bed)				
Residences	0.5	0.2	0	0.2
Visitor	0.2	0	0	N/A
Residential Facilities (per bed)				
Residential Care, General (>6 residents)	0.5	0.5	0	0.5
Visitor	0.2	0.2	0	0.2
Residential Care, Senior (>6 residents)	0.25	0.25	0	0.25
Visitor	0.2	0.2	0	0.2
Hospice (General) – >6 residents	0.25	0.2	0	0.2
Supportive Housing (per bed) – >6 residents	0.5	0.2	0	0.2
Visitor	0.2	0	0	N/A

[1] All private living spaces including but not limited to dens, studios, family rooms, studies and lofts are considered as "bedrooms" except that a maximum of one such room per unit shall not count as a bedroom if it is less than 100 square feet in area.

Note: For Residential Care (Senior) with fewer than 6 residents, Residential Care (Limited), Family Day Care, Hospice (General) with fewer than 6 residents, Hospice (Limited), Supportive Housing with fewer than 6 residents, and Transitional Housing, parking is only required for the existing residence. *Source: Santa Monica Municipal Code Article 9, Division 3, Chapter 9.28, Table 9.28.060*

TRANSPORTATION DEMAND MANAGEMENT (TDM)

The City of Santa Monica has a TDM ordinance in place for projects with 16 residential units or more.[2]

PROGRAMATIC ELEMENTS

Per the zoning ordinance, the following programmatic elements are required for residential uses as part of the TDM ordinance:

- Provide a transportation welcome package for residents.
- Implement a marketing and outreach program for the rental of units that targets: (A) employees of businesses located within a one-half mile radius of the project; (B) employees of the local hospitals; (C) employees of the Santa Monica Malibu Unified School District; (D) employees of the City's police and fire departments; (E) employees of businesses outside the one-half-mile radius but within the City of Santa Monica. In leasing units, the developer shall give priority to applicants in the foregoing categories provided that all such applicants meet generally applicable leasing qualifications and criteria imposed by the developer. It is not required that any residential units are occupied by such persons.
- Participate in a Transportation Management Organization (TMO). TMOs are City-certified organizations that provide transportation services in a particular area or Citywide. They are generally public-private partnerships, consisting primarily of area businesses with local government support. TMOs provide an institutional framework for TDM programs and services.
- Provide a monthly transportation allowance equal to at least 50 percent of the current cost of a monthly regional transit pass of the resident's choice (provision does not apply to a 100 percent Affordable project).
- Provide and maintain a pedestrian wayfinding information program to direct employees, visitors, and residents to/from the project site and nearest public transit locations, including bus stops, rail stations, and bikesharing facilities.
- Provide on-site transportation information including:
    - Current maps, routes, and schedules for public transit routes within one-half mile of the project site.
    - Transportation information including regional ridesharing agency, local transit operators, and certified TMO.
    - Ridesharing promotions material supplied by commuter-oriented organizations.
    - Bicycle route and facility information, including rental and sales locations, regional/local bicycle maps, and bicycle safety information within one-half mile of the project site.
    - A list of facilities available for carpoolers, vanpoolers, bicyclists, transit riders and pedestrians at the site.
    - Walking and biking maps for employees and visitors, including information about convenient local services and restaurants within walking distance.
    - Information to commercial tenants and employees regarding local rental housing agencies.

DESIGN ELEMENTS

Per the zoning ordinance, the following TDM-related design elements are required for residential projects:

- Provide sidewalks or other designated pathways that follow direct and safe routes from sidewalks in the public right-of-way to pedestrian entrances.

[2] *Santa Monica Municipal Code Article 9, Division 6, Chapter 9.53*

- Provide the required bicycle parking (discussed in the Bicycle Parking section).

TDM PROGRAM ADMINISTRATION

The TDM requirements are located within the Santa Monica Municipal Code (Article 9 Planning and Zoning, Division 6 Land Use and Zoning Related Provisions). There are two designated TDM staff at the City located within the Community Development Department. Developers are required to submit a Preliminary TDM Plan that meets the requirements of the TDM ordinance at the time of application for the project's planning entitlement. The Planning Director provides the developer initial comments on the preliminary Plan within 30 days. The Planning Director approves of disapproves the Preliminary TDM Plan. Developers have 30 days to revise the Plan is given a notice of disapproval. Prior to issuance of a building permit, design components of the TDM Plan must be shown on the construction drawings and be approved by the Planning Director. Prior to issuance of a Certificate of Occupancy, a Final TDM Plan is submitted and approved by the Planning Director and recorded against the property.

Developers are required to assign a Project Transportation Coordinator to manage all aspects of the TDM plan. Developers are required to submit an annual monitoring report to the Planning Director. Developers are also required to pay an annual TDM fee to pay for the cost of administration, including TDM outreach and support and City TMO implementation and activities.

UNBUNDLED PARKING

For residential developments with four or more units or in new conversions of non-residential buildings to residential use of 10 units or more, the City requires residential developments in certain areas of the City to unbundle parking, or sell/lease parking spaces separate from the purchase or lease of the residential use.[3] Projects with 100 percent Affordable units are exempt from this requirement.

BICYCLE PARKING

The City has bicycle parking requirements for short-term and long-term bicycle parking, as follows:[4]

- For residential uses (excluding single unit dwellings, duplexes, and family day care),
  - Long-term bicycle parking – 1 space per bedroom (including studios)
  - Short-term bicycle parking – 10 percent of long-term bicycle parking (minimum 2 spaces per project)
- Senior housing
  - Long-term bicycle parking – 0.5 space per bedroom (minimum 2 spaces per project)
  - Short-term bicycle parking – 25 percent of long-term bicycle parking (minimum 2 spaces per project)

Substitution of non-required bicycle spaces for required parking is allowed (excluding single or two-unit dwellings) according to the following provision:

- For every 5 bicycle spaces that are provided in the footprint of a required parking space, the parking requirement is reduced by 1 space, up to a maximum of 15 percent of the required parking spaces.

[3] *Santa Monica Municipal Code Article 9, Division 3, Chapter 9.28*
[4] *Santa Monica Municipal Code Article 9, Division 3, Chapter 9.28, Table 9.28.140*

CAR SHARE PARKING

Substitution of car share parking spaces for required parking is permitted if the following conditions are met:[5]

- For every car-share parking space provided, the parking requirement is reduced by 2 spaces, up to a maximum of 25 percent of the required parking spaces (not to exceed 10 spaces).
- A copy of the car-sharing agreement between the property owner and car-sharing company must be provided to the City.

IMPETUS/GOALS FOR PARKING POLICY

Per the City of Santa Monica's press release following adoption of the DCP:[6]

> *Eliminating parking minimums lets the market dictate whether a builder incorporates on-site parking and at what level. Over time, this is meant to encourage shared parking and use of alternative modes of transportation rather than contributing to congestion by subsidizing parking by requiring minimum levels of additional parking construction for every new building.*

Former Mayor of Santa Monica Ted Winterer wrote an opinion article for the Los Angeles Times discussing why the City eliminated parking requirements for all developments in the DCP area.[7] He included the following key points in his article:

- **By not requiring new parking, we can lower the overall cost to build new housing, remove barriers to opening businesses, spur the creative reuse of existing buildings and encourage drivers to more efficiently use the spaces that already exist.**
- **Parking is expensive to build. A single parking spot adds 12.5 percent to the price of an apartment.**
- Santa Monica pioneered the "park once" strategy with centralized public parking structures that made it easy for people to leave their cars behind and walk to multiple activities.
- Santa Monica has a robust transportation system with the Expo Line, Big Blue Bus, and bikeshare.
- Driving less helps to reduce carbon footprint and fight climate change.
- Drivers are more open to using public transit, walking or cycling when there's less access to cheap and easy parking.
- Parking has been extensively built in Southern California.
- Downtown Santa Monica already has approximately 10,000 parking spaces, much of which is inefficiently used.

[5] *Santa Monica Municipal Code Article 9, Division 3, Chapter 9.28*
[6] *Santa Monica City Council Approves Downtown Community Plan with Ambitious Affordable Housing Incentives and Requirements.* July 26, 2017. https://www.santamonica.gov/press/2017/07/26/santa-monica-city-council-approves-downtown-community-plan-with-ambitious-affordable-housing-incentives-and-requirements
[7] *Opinion: Why Santa Monica got rid of parking minimums downtown. And why other cities should consider following suit.* Ted Winterer. Los Angeles Times. September 25, 2017. https://www.latimes.com/opinion/livable-city/la-ol-santa-monica-parking-minimum-density-transit-20170924-story.html

David Martin, Santa Monica's Director of Planning and Community Development, was quoted for the American Planning Association article "People Over Parking" and stated:[8]

> *We're trying to create a new model of mobility and not emphasize the car as much as we've done in the past.*

PARKING POLICY OUTCOMES

David Martin, the Planning and Community Development Department Director, prepared a report on March 22, 2019 which provided an update on the outcomes of the DCP policy. Between the adoption of the DCP (July 25, 2017) and the date of the report, the report states that five projects were proposed with no parking on site.[9] These projects included four 100 percent Affordable housing projects, and one mixed-use housing project with 40 units (20 percent Affordable). Five Single Room Occupancy (SRO) mixed-use housing projects totaling 320 units were proposed for the DCP area and all five projects elected to build no parking on site.

The report states:

> *With the abolition of parking minimums, a handful of single lot projects are moving forward and providing both ground floor active commercial spaces as well as upper-level housing.*

[8] *People Over Parking*. Jeffrey Spivak. American Planning Association. October 2018. https://www.planning.org/planning/2018/oct/peopleoverparking/

[9] *Downtown Community Plan Monitoring Report*. City of Santa Monica Information Item March 22, 2019, from David Martin, Community Development Department Director. https://www.smgov.net/departments/council/infoitems.aspx

SAN FRANCISCO

POLICY(IES) ENACTED

ELIMINATION OF PARKING MINIMUMS CITYWIDE

On December 11, 2018 San Francisco's Board of Supervisors voted to eliminate minimum parking requirements for all land uses citywide. Before the legislation, not all parking districts had minimum parking requirements, but those that did typically required one parking space per unit.

Prior to the elimination of minimum parking requirements, San Francisco had the following options for reducing required parking under the Planning Code:[10]

- Replace with Bike Parking – Any project could replace required parking for automobiles with bike parking.
- Any 100 percent Affordable housing project could waive off-street parking requirements in any zoning district except for RH1, and RH2 (single-family and two-family districts).
- The Zoning Administrator could administratively waive any off-street parking requirements for any project in a Neighborhood Commercial District.
- Any project that triggers the City's Transportation Demand Management (TDM) Ordinance could reduce parking below required levels if, and to the extent in which such a parking reduction is used to meet their TDM requirements. These tended to be for larger projects.
- San Francisco's local density bonus program (HOME-SF) is designed to incentivize building more affordable and family-friendly housing in neighborhood commercial and transit corridors through zoning modifications such as *waiving minimum parking requirements*. HOME-SF projects require an entitlement called "HOME-SF Project Authorization," which requires Planning Commission approval, pursuant to the Planning Code.
- Accessory Dwelling Units (ADU) in San Francisco were not required to include off-street parking.
- In certain zoning districts, projects whose sole frontage is on a protected street (fronting the bike network, key transit routes or neighborhood commercial street) were not required to include off-street parking.

All zoning districts have a maximum parking limit. The 2018 policy did not change the parking maximums. Parking maximums range from 0.25 space per dwelling unit to 1.5 spaces per dwelling unit, depending on the zoning district.

Table 3 summarizes the residential parking requirements in the City of San Francisco after the 2018 policy was passed.

Table 3: City of San Francisco Off-Street Parking Requirements for Residential Uses

	Parking Minimums (spaces/unit) Citywide	**Parking Maximums (spaces/unit)** Varies based on the Zone
Dwelling Unit	0	0.25-1.5
Group Housing of any kind	0	N/A

Source: Ordinance No 311-18. Table 151.

[10] *Overview & FAQ Legislation to Remove Parking Minimums in San Francisco.* Paul Chasan, Senior Planning/Urban Designer. https://www.spur.org/sites/default/files/2020-05/paul_chasen_overview_and_faq.pdf

TRANSPORTATION DEMAND MANAGEMENT (TDM)

The City of San Francisco has TDM requirements in place for residential land uses. Projects are assigned points based on how many parking spaces are provided. TDM measures are grouped into eight categories with a menu of options for each category. Applicants are given point values for each option that they select.[11]

PROGRAMMATIC ELEMENTS

The following programmatic elements are included in the menu of options as part of the City's TDM program:

- Car share
  - Membership
- Family
  - On-site childcare
  - Provision of utility cart or cargo bicycles
- Information and Communications
  - Tailored transportation marketing services
- High occupancy vehicles
  - Contributions/incentives equivalent to the cost of a monthly bus pass
  - Shuttle bus service
- Parking management
  - Unbundled parking
  - Provide parking supply less than the established neighborhood parking rate

DESIGN ELEMENTS

The following design elements are included in the menu of options as part of the City's TDM program:

- Car share
  - Parking
- Family
  - Storage for car seats/strollers
- Information and communications
  - Multi-modal wayfinding signage
  - Real-time transportation information displays
- Active transportation
  - Bicycle parking
  - Bicycle repair station
  - Bicycle maintenance services
  - Bicycles for residents
  - Bike share membership
  - Streetscape improvements
- Delivery
  - Area for receipt of deliveries
- Land use

[11] *Transportation Demand Management Measures.* City and County of San Francisco. *Adopted August 4, 2016, Version 3. Updated March 11, 2021.* https://default.sfplanning.org/transportation/tdm/TDM_Measures.pdf

- On-site Affordable housing

TDM PROGRAM ADMINISTRATION

The TDM provisions are located within the City's Planning Code, Sec 169 Transportation Demand Management Program. The Planning Department administers the TDM Program. The property owner submits a TDM Plan Review Application to the Planning Department with an administrative fee, and the Planning Department reviews and approves the Plan. If the project is approved, the requirement for a TDM Plan is included as a Condition of Approval. The final TDM Plan is record to the property through a Notice of Special Restrictions as part of and prior to issuance of the building permit.

Planning Department staff conduct a site inspection to confirm that all approved physical improvement measures in the TDM plan have been implemented and/or installed, prior to the Certificate of Occupancy. Throughout the life of the property, the property owner is required to maintain a TDM coordinator who coordinates with the City on the project's compliance with the approved TDM Plan. The property owner submits annual compliance reports to the Planning Department, along with an administrative fee. City staff may access the property to conduct site visits, surveys, inspection of physical improvements, and/or other empirical data collection. City staff may request that the property owner facilitate in-person, phone, e-mail, or web-based interviews with residents, tenants, employees, and/or visitors.

UNBUNDLED PARKING

San Francisco requires off-street parking spaces for residential projects with 10 or more units to be sold or leased separately from the rental or sale of dwelling units.[12]

BICYCLE PARKING

Bicycle parking is required for residential uses. Long-term and short-term spaces need to be provided, as follows:[13]

- 1 long-term space/unit. For developments over 100 units, 100 units plus 1 space for every 4 units need to be provided
- 1 short-term space/20 units.

Developers can satisfy a portion of the required bicycle parking by paying a bicycle parking in lieu fee, which is deposited into a bicycle parking fund.

CAR SHARE PARKING

If parking is provided, car share spaces are required when a project has at least 50 units. The following car share parking spaces are required:[14]

- 50-200 residential units – 1 space
- 201+ residential units – 2 spaces, plus 1 space for every 200 dwelling units over 200

[12] *Downtown Boise Parking Strategic Plan.* City of Boise, prepared by Kimley Horn. http://www.ccdcboise.com/wp-content/uploads/2016/02/Document-D3-City-Carshare-Best-Practices.pdf
[13] *San Francisco Planning Code. Article 1.5. Section 155.2. Table 155.2*
[14] *San Francisco Planning Code. Article 1.5. Section 166.*

Car share spaces must be made available, at no cost, to a certified car share organization for purposes of providing car share services for its car share service subscribers.

IMPETUS/GOALS FOR PARKING POLICY

Per the adopted ordinance that eliminated parking minimums citywide:[15]

> *In the 1950s, the Planning Code established minimum parking requirements for new buildings. Beginning in 1973, the City reduced or streamlined minimum parking requirements in various San Francisco zoning districts as a strategy to reduce traffic congestion, encourage the use of sustainable transportation modes (walking, cycling, and transit), and reduce housing and building costs. The recently-enacted Accessory Dwelling Unit, Transportation Demand Management, and HOME-SF ordinances all permit exceptions from minimum parking requirements. Eliminating parking requirements in all zoning districts City-wide furthers these goals as well as the policies and objectives of the General Plan's Transportation Element.*

San Francisco Planning Department staff cited the following benefits of removing parking minimums:[16]

- **Reduced cost of constructing housing.**
  - **Underground parking space in San Francisco - $38,000/space**
  - **Above ground parking space in San Francisco - $29,000/space**
  - **Anecdotal conversations by Planning staff with local developers indicate these numbers are grossly underestimated. Staff believes the actual cost of building off-street parking in San Francisco to be $70,000-$80,000 / space.**
- **Increased Housing Production – Not building parking frees up space for more productive land uses like housing. On small or irregularly shaped sites, sponsors may not be able to fit their required parking spaces. This limits the overall unit count they can legally build, constraining the overall density of the building.**
- Reduced Reliance on Cars and Better Support for Neighborhood Retail – People who don't have access to parking spaces are more likely to use transit and more likely to shop locally.
- Increased Safety for People Walking and Biking – Less parking means fewer cars crossing the sidewalk.
- Support Neighborhood Diversity – Diverse housing stock supports diverse family sizes and lifestyles. While many people will still use their cars, other San Francisco residents don't own or need a car.
- Better Architecture – Mandatory off-street parking results in bulky buildings, because parking garages require a lot of space. Parking driveways result in inactive building facades.
- Improved process for Small Property and Business Owners – The primary beneficiaries of this legislation will likely be small property owners/homeowners and small business owners. While the Planning Code had numerous options for project sponsors to reduce off-street parking, doing so requires a level of technical expertise that disproportionately benefits larger projects where developers can afford to hire consultants to help them navigate our complex process.

[15] *File 181028.* Committee/Board of Supervisors. Agenda Packet Contents List. Land Use and Transportation Committee. November 26, 2018. https://sfgov.legistar.com/View.ashx?M=F&ID=6825621&GUID=F6C1EAE0-223D-41E8-9D54-E902C6447502

[16] *Overview & FAQ Legislation to Remove Parking Minimums in San Francisco.* Paul Chasan, Senior Planning/Urban Designer. https://www.spur.org/sites/default/files/2020-05/paul_chasen_overview_and_faq.pdf

PARKING POLICY OUTCOMES

A graduate student at San Jose State University conducted a study in 2016 on the impacts of San Francisco's parking reforms on housing affordability.[17] This study was conducted prior to the elimination of all parking requirements in the City in 2018. However, at the time of the study, certain districts within the City had already eliminated parking requirements.

The study compares the Market and Octavia Plan Area, which has no parking minimums to the Van Ness Special Use District, which had a parking requirement of 1 space per dwelling unit. Using City and County of San Francisco databases and documents, the study collected data on all real-estate developments in these two areas with at least 10 housing units and which were approved by the San Francisco Planning Commission between April 8, 2008 and November 18, 2014. Statistical tests compared these two areas based on four outcome variables:

- Parking supply – On average, developments with no minimum requirement had 0.36 spaces per unit and those with a minimum requirement had 0.90 spaces per unit. The study estimates that had the City maintained parking minimums throughout the study area, developers would have produced an additional 1,577 parking spaces occupying 473,230 square feet.
- Housing density – On average, developments with no minimum requirement had 263 units per acre and with a minimum requirement had 162 units per acre. The study estimated that a typical 0.4-acre lot with a minimum parking requirement, on average, had about 39 fewer dwelling units than a similar parcel with no requirement. The study estimates that absent reforms, 1,031 fewer dwelling units would have been approved, a 27 percent reduction.
- Affordable housing – On average, developments with no minimum requirements included 23 percent affordable units and with a minimum requirement included 6 percent Affordable units. The study estimates that had the City maintained parking minimums throughout the study area, there may have been only 221 Affordable units approved instead of 834, a 73 percent reduction.
- Estimated construction costs based on building permits – On average, units in developments with no minimum requirements cost $230,208 to build and with a minimum requirement cost $330,666 to build. The study estimates that based on the amount an owner would need to charge to provide a typical return on investment, residents of the Market and Octavia neighborhood might have paid an extra $850 per month in housing expenses on average.

A 2010 Value Pricing Pilot project in San Francisco looked at unbundling parking in residential buildings combined with the policy of including car share parking spaces on-site.[18] The analysis found that these combined policies significantly reduced household vehicle ownership rates; apartments with the presence of carsharing and unbundled parking had an average vehicle ownership rate of 0.76 vehicles/unit compared to apartments without carsharing and unbundled parking that had an average vehicle ownership rate of 1.04 vehicles/unit. 22 percent of the residents surveyed responded that the presence of car sharing impacted their residential location choice.

[17] *Parking Reform & Housing Affordability Lessons from San Francisco.* Bill Chapin. San Jose State University. December 2016.

[18] MTC's VPP Parking Project. Parking Requirements & Unbundling. https://parkingpolicy.com/reduced-requirements/#_ftnref2

BERKELEY

POLICY(IES) ENACTED

ELIMINATION OF RESIDENTIAL PARKING MINIMUMS AND INSTITUTION OF PARKING MAXIMUMS NEAR TRANSIT

On January 26, 2021 the Berkeley City Council passed an ordinance that eliminated parking requirements for residential properties citywide, with a few exceptions on hillside properties. Before implementation of the policy, developers were previously required to build one parking space per unit in most zoning districts. The City also implemented parking maximums in transit-rich areas. Off-street residential parking cannot be offered at a rate of more than 0.5 space per unit for projects located within 0.25 miles of a high-quality transit corridor. Table 4 summarizes the residential requirements in Berkeley after the 2021 parking policy was passed.

Table 4: City of Berkeley Off-Street Parking Requirements for Residential Uses

Housing Type	Parking Minimums Citywide (except if project is Located on a Roadway less than 26' in width in the Hillside Overlay)	Parking Maximums[1] Projects with 2+ dwelling units located within 0.25 miles of a major transit stop or along a transit corridor with service at 15-minute headways during morning and afternoon peak periods
Dwellings (including Group Living)	0	0.5 spaces/unit
Dormitories, Fraternity and Sorority Houses, Rooming and Boarding Houses and Senior Congregate Housing	0	+
Rental of Rooms	0	+
Community Care Facilities	1 space/2 non-resident employees	+
Nursing Homes	1 space/3 employees[2]	+
Live/Work Units	1 space/first 1,000 SF work area plus 1 additional space/750 SF work area[3]	+
Single Room Occupancy Residential Hotels	0[4]	+

[1] Parking maximums do not apply to residential projects, including the residential portion of mixed-use projects, with the majority of the units subject to recorded affordability restrictions, projects located on a roadway with less than 26' in the Hillside Overlay, and projects located in the Environmental Safety-Residential District.
[2] No requirement for nursing homes in City's downtown district.
[3] Requirement applies if non-resident workers and/or clients are permitted in any work area.
[4] Applies only to City's downtown district.
+This information could not be confirmed based on an online review of the Berkeley Municipal Code.
Source: Berkeley Municipal Code. Title 23. Subtitle 23D. Chapter 23D.36

TRANSPORTATION DEMAND MANAGEMENT (TDM)

In conjunction with the parking reforms, the City implemented a TDM ordinance. The TDM regulations apply to properties with 10 or more dwelling units. The TDM regulations include the following provisions.[19]

[19] *Ordinance No. 7,751-N.S.* https://www.cityofberkeley.info/Clerk/City_Council/2021/02_Feb/Documents/2021-02-09_Item_04_Ordinance_7751.aspx

PROGRAMMATIC ELEMENTS

Per the zoning ordinance, the following programmatic elements are required for residential uses as :

- Lease or sell parking spaces separate from the rental or purchase of dwelling units, such that the resident can rent/buy a unit at a price lower than would be the case if there was a single price for both the dwelling unit and the parking space.
- Offer at least one of the following public transit benefits, at no cost to the resident, for a period of ten years after the issuance of a Certificate of Occupancy. For projects that include 99 dwelling units or fewer, the project shall provide one public transit benefit per bedroom, up to a maximum of two benefits per dwelling unit. For projects of 100 dwelling units or more, the project shall provide one public transit benefit for every bedroom in each dwelling unit. A notice describing these transportation benefits shall be posted in a location or locations visible to residents.
    - A monthly pass for unlimited local bus transit service; or
    - A functionally equivalent public transit benefit in an amount at least equal to the price of a non-discounted unlimited monthly local bus pass. Any benefit proposed as a functionally equivalent transportation benefit shall be approved by the Zoning Officer in consultation with the Transportation Division Manager; and

DESIGN ELEMENTS

Per the zoning ordinance, the following design elements are required for residential uses:

- Provide publicly-available, real-time transportation information in a common area, such as a lobby or elevator bay, on televisions, computer monitors or other displays readily visible to residents and/or visitors. Provided information shall include, but is not limited to, transit arrivals and departures for nearby transit routes.

TDM PROGRAM ADMINISTRATION

The TDM requirements are located in Berkeley's Municipal Code, Title 23 Zoning, Division 3 Citywide Provisions. The Planning Department staff conduct a site inspection to confirm the physical requirements of the TDM ordinance, prior to the Certificate of Occupancy. The property owner is required to submit compliance reports to Planning Department staff. Property owners are required to pay administrative fees.

UNBUNDLED PARKING

As stated in the TDM section (above), all parking spaces for residents must be leased or sold separately from the rental or purchase of dwelling units, such that the resident can rent/buy a unit at a price lower than would be the case if there was a single price for both the dwelling unit and the parking space.

BICYCLE PARKING

For residential projects (5+ units), the City has bicycle parking requirements for short-term and long-term bicycle parking, as follows:[20]

- Dwelling units
    - At least 1 long-term parking space per 3 bedrooms
    - At least 2 short-term parking spaces, or 1 space per 40 bedrooms, whichever is greater

[20] *Ordinance No. 7,751-N.S.* https://www.cityofberkeley.info/Clerk/City_Council/2021/02_Feb/Documents/2021-02-09_Item_04_Ordinance_7751.aspx

- Group living, rooming houses, boarding houses
    - At least 2 long-terms spaces, or 1 space per 2.5 bedrooms, whichever is greater
    - At least 2 short-term parking spaces, or 1 space per 20 bedrooms, whichever is greater

CAR SHARE PARKING

For residential projects that provide 10 or more vehicle parking spaces, car share spaces must be provided as specified below:[21]

- 11-30 parking spaces provided – 1 car share space
- 30-60 parking spaces provided – 2 car share spaces
- 61+ parking spaces provided – 3 car share spaces, plus 1 space for every additional 60 spaces

The required car share spaces must be offered to a car sharing service at no cost.

IMPETUS/GOALS FOR PARKING POLICY

In a presentation to City Council, city staff cited the following issues with current minimum parking requirements:[22]

- **Increase housing costs**
- **Reduce opportunities for more housing**
- Produce too many parking spaces
- Conflict with the City of Berkeley climate and public safety goals

Prior to implementation of the parking policy, the City conducted a residential parking utilization study. The study found that 45 percent of off-street parking spaces were utilized and 61 percent of on-street parking spaces were utilized. The study included a review of car registration data which showed that 0.5 cars were registered for each unit. This data demonstrates the City's residential parking supply has capacity.

Per the City's ordinance, the purpose of instituting off-street parking maximums is to be consistent with:[23]

- **Housing Element goals for developing housing at all affordability levels by limiting the amount of on-site vehicle parking allowed.**
- City Transportation Element goals of reducing vehicle trips, encouraging public transit use, and promoting bicycle and pedestrian safety.
- City Climate Action Plan goals of reducing private vehicle travel and promoting mode shift to more sustainable transportation options.

[21] *Ordinance No. 7,751-N.S.* https://www.cityofberkeley.info/Clerk/City_Council/2021/02_Feb/Documents/2021-02-09_Item_04_Ordinance_7751.aspx
[22] *Parking Reform.* Presentation January 26, 2021 City Council meeting. https://www.berkeleyside.org/wp-content/uploads/2021/01/Item-1-Pres-Planning.pdf
[23] *Ordinance No. 7,751-N.S.* https://www.cityofberkeley.info/Clerk/City_Council/2021/02_Feb/Documents/2021-02-09_Item_04_Ordinance_7751.aspx

PARKING POLICY OUTCOMES

Given that the policy was implemented less than a year ago (in 2021), Walker did not find any research or data showing the outcomes of the parking policy implementation.

LOS ANGELES

POLICY(IES) ENACTED

ELIMINATION OR REDUCTION OF PARKING MINIMUMS

The City of Los Angeles has enacted several parking reform policies, including:

- The Adaptive Reuse Ordinance in 1999
- Cornfield Arroyo Seco Plan
- DTLA 2020 Plan

ADAPTIVE REUSE ORDINANCE

In 1999, Los Angeles passed its Adaptive Reuse Ordinance (ARO) which enabled the conversion of older, economic distressed, or historically significant buildings located in the Greater Downtown Los Angeles Area to apartments, live/work units or visitor-serving facilities.[24] An adaptive reuse project is defined as any change of use to dwelling units, guest rooms, or joint living and work quarters in all or any portion of any eligible building. The ordinance provides incentives for adaptive reuse projects, allowing for increased density and a streamlined development review process.

The ordinance also eliminated parking requirements for adaptive reuse projects that preserve these buildings. The required number of parking spaces, with the passage of the ordinance, must be the same as the number of spaces that existed on June 3, 1999.

CORNFIELD ARROYO SECO PLAN

In 2013, the City adopted the Cornfield Arroyo Seco Plan (CASP) that rezoned largely industrial properties adjacent to the Los Angeles River, and in proximity to three Metro transit stations. The CASP encompasses an area of 660 acres (1 square mile). A key feature of the CASP is its value capture incentive zoning system, which grants housing developers additional floor area rights in exchange for setting aside Affordable units for low-income households.

The CASP eliminated parking requirements for all land uses in the CASP area. Projects that elect to provide parking must provide:[25]

- Vehicle charging stations – minimum of 1 percent of vehicle parking spaces.
- Designated stalls for scooters, mopeds, and motorcycles at a ratio of one space/25 units and/or 25,000 square feet.
- Clear directional signage indicating the location of vehicle charging stations, shared vehicle parking spaces, and scooter, moped, and motorcycle stalls shall be provided at all parking area entrances.
- Parking unbundled from the cost of rent or housing ownership.
    - Restricted Affordable units are exempt from this regulation.
- Applicants are encouraged to provide one shared vehicle parking space/25 units and/or 25,000 square feet.

[24] *Adaptive Reuse Ordinance.* Effective December 20, 2001. https://www.ladbs.org/docs/default-source/publications/ordinances/adaptive-reuse-ordinance---l-a-downtown-incentive-areas.pdf?sfvrsn=7
[25] *Cornfield Arroyo Seco Specific Plan.* Los Angeles Department of City Planning. https://planning.lacity.org/odocument/9d013e0f-452b-4857-86d5-fcd357b27a4d

DTLA 2040 PLAN

The purpose of the DTLA 2040 Plan is to create and implement a vision for the future of Downtown Los Angeles. The Plan strives to support and sustain the ongoing revitalization of Downtown Los Angeles while accommodating projected future growth. The Plan includes policies, plans, and implementation programs that frame the City's long-term priorities. The Plan will be the first in the City to apply new zoning tools developed as part of the comprehensive update to the City's zoning code.

The DTLA 2040 Plan would eliminate parking requirements for all land uses in Downtown Los Angeles. On September 23, 2021 the City Planning Commission recommended approval of the Downtown Community Plan and new Zoning Code. Final documents need to be produced by City Planning and ultimately approved by the City Council.

SUMMARY OF PARKING REQUIREMENTS

Table 5, on the following page, summarizes the residential parking requirements in Los Angeles.

Table 5: City of Los Angeles Off-Street Parking Requirements for Residential Uses

Number of Habitable Rooms	Parking Minimums (spaces per unit, unless otherwise noted)			
	Citywide[1]	Central City Parking District (Downtown Los Angeles)	Cornfield Arroyo Seco Plan	*Downtown Community Plan Area - pending (would replace the Central City Parking District requirements)*
Single-family Dwelling	2	N/A	N/A	*N/A*
Apartments and Duplexes				
<3 habitable rooms (such as a typical studio)	1	1	0	*0*
3 habitable rooms (such as a typical 1 bedroom unit)	1.5	1	0	*0*
>3 habitable rooms (such as a typical 2 bedroom unit)	2	1[2]	0	*0*
Affordable Housing				
Within 1,500 feet of a mass transit station or major bus route (regardless of habitable rooms)	1	+	0	*0*
1-2 habitable rooms	1	+	0	*0*
3+ habitable rooms	1.5	+	0	*0*
Restricted to senior citizens and/or disabled individuals	0.5	+	0	*0*
Single-Room Occupancy Hotels	0.25	+	0	*0*
Senior Independent Housing[3]	1	+	0	*0*
Assisted Living Care Housing	1[4]	+	N/A	*0*
Skilled Nursing (per guest bed)	0.2	+	N/A	*0*
Alzheimer's/Dementia Care Housing (per guest bed)	0.2	+	N/A	*0*
Boarding House or Dormitory				
First 30 guestrooms	1	N/A	0	*0*
Next 30 guestrooms	0.5	N/A	0	*0*
Remaining guestrooms	0.33	N/A	0	*0*
First 20 guestrooms	N/A	0.5	0	*0*
21-40 guestrooms	N/A	0.25	0	*0*
41+ guestrooms	N/A	0.17	0	*0*

[1] Certain Overlay Districts have different parking requirements than the citywide requirement.
[2] When more than six dwelling units have more than 3 habitable rooms per unit, the parking for these units shall be at 1.25 spaces per unit.
[3] For housing developments occupied by disabled persons, the required parking may be reduced by up to 50 percent.
[4] Or 1 parking space for each guest room.
+This information could not be confirmed based on an online review of the Los Angeles Municipal Code.
Source: Los Angeles Municipal Code. Section 12.21.

TRANSPORTATION DEMAND MANAGEMENT (TDM) - CITYWIDE

The City's current TDM ordinance only applies to non-residential developments of more than 25,000 square feet. The City is drafting an updated ordinance that would apply to residential developments with 16 or more units.[26] In the draft ordinance, all projects subject to the TDM Program must complete a TDM Plan and receive approval from LADOT prior to receiving entitlements or building permits. The property owner must provide LADOT with annual compliance documentation.

UNBUNDLED PARKING - CITYWIDE

Unbundled parking is not required for residential properties citywide. As discussed in the Cornfield Arroyo Seco Plan section (above), projects that provide parking in the CASP plan area must unbundle parking charges from the cost of housing rent or ownership.

BICYCLE PARKING - CITYWIDE

Required parking may be replaced by bicycle parking at the following percentages:[27]

- No more than 10 percent of the required parking spaces can be replaced with bicycle parking spaces.
- For residential projects within 1,500 feet of a major transit stop can replace up to 15 percent of the required parking spaces.
- If a residential building includes at least the minimum number of restricted Affordable units to receive a density bonus, 30 percent of the required parking can be replaced.

Required bicycle parking spaces are summarized below:

- 1-25 units – 1 short-term space per 10 units, 1 long-term space per unit
- 26-100 units – 1 short-term space per 15 units, 1 long-term space per 1.5 units
- 101-200 units – 1 short-term space per 20 units, 1 long-term space per 2 units
- 201+ units – 1 short-term space per 40 units, 1 long-term space per 4 units

CAR SHARE PARKING - CITYWIDE

Car share parking is not required for residential properties citywide. In the CASP area, applicants are encouraged to provide one shared vehicle parking space/25 units and/or 25,000 square feet.

IMPETUS/GOALS FOR PARKING POLICY

ADAPTIVE REUSE ORDINANCE

The purpose for the adaptive reuse ordinance is as follows (per the adopted ordinance):[28]

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[26] *Fact Sheet: Transportation Demand Management (TDM) Program Update.* LADOT/Los Angeles City Planning. https://planning.lacity.org/odocument/d7e3780b-3155-44a4-98cf-0fd673a6612b/TDM-FactSheet_English.pdf

[27] *Supplemental Plan Check Correction Sheet for Bicycle Parking Ordinance. City of Los Angeles Department of Building and Safety.* https://www.ladbs.org/docs/default-source/forms/plan-check-2017/supplemental-correction-sheet-for-bicycle-parking-ordinance-pc-str-corrlst111-2014.pdf?sfvrsn=9ffbeb53_23

[28] *Adaptive Reuse Ordinance.* Subdivision 26 of Subsection A of Section 12.22 of the Los Angeles Municipal Code. Effective 12/20/01.

> *The purpose of this Subdivision is to revitalize the Greater Downtown Los Angeles Area and implement the General Plan by facilitating the conversion of older, economically distressed, or historically significant buildings to apartments, live/work units or visitor-serving facilities. This will help to reduce vacant space as well as preserve Downtown's architectural and cultural past and encourage the development of a live/work and residential community Downtown, thus creating a more balanced ratio between housing and jobs in the region's primary employment center. This revitalization will also facilitate the development of a "24-hour city" and encourage mixed commercial and residential uses in order to improve air quality and reduce vehicle trips and vehicle miles traveled by locating residents, jobs, hotels and transit services near each other.*

CORNFIELD ARROYO SECO PLAN

The purpose of the CASP Parking and Access guidelines, as defined in the Plan, are as follows:[29]

1. *Manage and control the parking supply and demand.*
2. *Avoid an oversupply of parking.*
3. *Increase pedestrian, bicycle, and transit use, and reduce vehicular trips to, through, and within the area.*
4. *Minimize the area's parking footprint and preserve land for other productive uses.*
5. *Reduce the cost of parking typically associated with new construction.*
6. *Provide vehicular access from side streets or alleyways to minimize driveways along active streets and to maintain building continuity and avoid vehicle and pedestrian conflicts.*
7. *Create active ground floors around the base of parking structures that are adjacent to Active Streets.*
8. *Screen parking to provide a safe, aesthetically pleasing and secure environment for pedestrians.*
9. *Provide adequate signage to public parking structures to aid visitors in finding them upon arrival and getting oriented to their surroundings.*
10. *Encourage the use of alternate modes of transportation by reducing the availability of off-street parking.*
11. *Limit the number and width of curb cuts and vehicular entries to promote street wall continuity and reduce conflicts with pedestrians.*
12. *Encourage the provision of shared parking agreements and/or public parking facilities.*

DTLA 2040

The Department of City Planning Recommendation Report provides the following rationale for eliminating parking minimums in Downtown Los Angeles:[30]

> *Downtown is a transit-rich environment that offers many mobility options to workers, residents, and visitors. The Proposed Plan aims to prioritize infrastructure for pedestrians, bicyclists and other active transportation modes to reduce dependency on private vehicles, which are the largest contributor to greenhouse gas emissions in the state. The Proposed Project is tailored to encourage developments that contribute to active streets, include pedestrian access on large sites and provide public open spaces.*

[29] *Cornfield Arroyo Seco Specific Plan.* Los Angeles Department of City Planning. https://planning.lacity.org/odocument/9d013e0f-452b-4857-86d5-fcd357b27a4d

[30] *Recommendation Report.* Department of City Planning. June 17, 2021. https://planning.lacity.org/odocument/04ca2a68-c5fd-4a26-90c2-8128910239f7/DRAFT_DTLA_CPC_Staff_Recommendation_Report.pdf

Eliminating parking minimums allows flexibility for projects to either eliminate parking altogether or provide parking as needed, offering a tool for offsetting overall development costs as well as reducing the footprint of parking within the overall built environment.

POLICY OUTCOMES

ADAPTIVE REUSE ORDINANCE

The adaptive reuse ordinance has been partially credited with the revitalization of Downtown Los Angeles. During the 20-year period following the ordinance adoption, over 12,000 new housing units, more than 30 percent of the total 37,000 units added in Downtown Los Angeles over that time, were created through adaptive reuse.[31]

CORNFIELD ARROYO SECO PLAN

Los Angeles City Planning is launching a new effort to evaluate and amend the Cornfield Arroyo Seco Specific Plan. Specifically, City Planning is looking to update the CASP's incentive zoning regulations so that they can better advance opportunities for affordable and mixed-income housing. In a fact sheet released by Los Angeles City Planning in fall 2020, staff suggests that both affordable and mixed-income housing production has been limited within the specific plan area.[32] Since the CASP was adopted in 2013, a total of 360 units have been proposed. Of these 360 units, six units would be reserved as Affordable units with Extremely Low Income households pursuant to the CASP's Affordable housing incentives.

The staff report cites the following reasons for why housing development has been limited in the CASP:

> *Aside from encouraging affordable housing, a primary goal of the CASP is to protect existing industrial areas from residential encroachment, while also finding areas where residential, commercial, and light industrial uses can co-locate. Accordingly, the majority of land in the CASP has been zoned to not allow predominantly residential development. A limited number of parcels, comprising 25 percent of land in the CASP, is zoned Urban Village which allows for residential projects. The CASP's limitations on residential development, and emphasis on job-producing uses, help to explain the limited housing production seen in the CASP.*

DTLA 2040

The DTLA 2040 plan and policies are not yet adopted; therefore, there are no outcomes to report.

[31] *Adaptive Reuse – Reimagining Our City's Buildings to Address Our Housing, Economic, and Climate Crises.* Central City Association of Los Angeles. April 2021.
http://www.ccala.org/clientuploads/directory/whitepapers/CCA_Adaptive_Reuse_White_Paper_FINAL_.pdf

[32] *Fact Sheet: Cornfield Arroyo Seco Specific Plan (CASP) Update.* Los Angeles City Planning.
https://planning.lacity.org/odocument/f8d506f2-0a53-4929-8186-48715be0580f/CASP-FactSheet_English.pdf

SAN DIEGO

POLIC(IES) ENACTED

ELIMINATION OF PARKING MINIMUMS FOR MULTI-FAMILY LAND USES NEAR TRANSIT AND INSTITUTION OF PARKING MAXIMUMS FOR MULTI-FAMILY LAND USES DOWNTOWN

On March 25, 2019 San Diego approved the elimination of parking requirements for residential dwelling units in areas close to public transit. [33] These areas are designed as Transit Priority Area (TPA), defined as areas within ½ mile of an existing or planned major transit stop, if the planning major transit stop is scheduled to be completed within the planning horizon in the San Diego Association of Governments.

Minimum parking requirements were also removed for dwelling units in Downtown San Diego. In addition to the zero minimum parking space requirement, a maximum parking ratio of one space per unit was adopted for multi-family residential development in Downtown San Diego. A development can exceed the required ratio of one space per unit if:

- The development floor area ratio (FAR) is not less than 80 percent of the maximum FAR.
- At least 20 percent of all parking spaces provided include electric vehicle supply equipment for the ready installation of charging stations.
- Transportation amenities are provided.
- All off-street parking spaces that exceed the one space per unit requirement must be in an underground parking garage.

Table 6, on the following page, summarizes the residential parking minimums and maximums in San Diego.

[33] *Parking Standards in Transit Priority Areas Fact Sheet.* The City of San Diego Planning Department. https://www.sandiego.gov/sites/default/files/tpa_fact_sheet_updated_04.24.19_final_onwebpage.pdf

Table 6: City of San Diego Off-Street Parking Requirements for Residential Uses

Housing Type	Parking Minimums (spaces/unit, unless otherwise noted)					Parking Maximums (spaces/unit, unless otherwise noted)
	Basic	Transit Overlay	Transit Priority Area[1]	Parking Impact[2]	Downtown San Diego	Downtown San Diego
Dwelling Units						
Studio up to 400SF	1.25	1	0	1.5	0	1
1 bedroom or studio over 400 SF	1.5	1.25	0	1.75	0	1
2 bedrooms	2	1.75	0	2.25	0	1
3-4 bedrooms	2.25	2	0	2.5	0	1
5+ bedrooms	2.25	2	0	Beach:2.5 Campus:1	0	1
Affordable Housing dwelling units	N/A[3]	N/A[3]	0	N/A[3]	0	1
Single Family Dwelling	2	2	2	2	N/A	N/A
Condominium Conversion						
Studio (over 400SF)/1 bedroom	1	0.75	0	1.25	+	+
2 bedrooms	1.25	1	0	1.5	+	+
3+ bedrooms	1.5	1.25	0	1.75	+	+
Rooming House (per tenant)	1	0.75	0.75	1	+	+
Residential Care Facility (per bed or permit)	0.33	0.25	0.25	0.33	0	0.1
Transitional Housing (per on-site employee)						
6 or fewer persons	1	0	0	0	0	1[4]
7+ persons	1	0	0	0	0	1[4]
Permanent Supportive Housing (per on-site employee)	1	0	0	0	0	1
Continuing Care Retirement Communities						
Dwelling Units	1	0.75	0.75	1.25	+	+
Convalescent and memory care rooms (per bed)	0.33	0.33	0.33	0.33	+	+
Employees (per peak shift)	1	0.75	0.75	1.25	+	+
Live/Work Units	+	+	+	+	0	1
Single Room Occupancy Hotels (per room)	1	0.5	0.5	0.5	0.5[5]	+
Living Units	+	+	+	+	0	0.5[6]
Group Living (per room)	+	+	+	+	0	0.1

[1] Transit Priority Areas defined as areas within ½ mile of an existing or planned major transit stop. The regulations for TPAs supersede any overlay zones such as the Transit Overlay Zone or the Beach or Campus Overlay zone that lie within a TPA.
[2] Includes the Beach Impact Area and Campus Impact Area.
[3] Based on parking demand from Walkability/Transit Index in City Code Section 142.0527. In Parking Impact area, the requirement is an additional 0.25 space.
[4] Plus 1 space for every 6 beds.
[5] For Affordable SROs, the following ratios apply: 50% Area Median Income (AMI) - 0.1 spaces/unit, 40% AMI or below - 0 spaces/unit.
[6] For Affordable living units, the following ratios apply: 50% AMI – 0.2 spaces/unit, 40% AMI or below – 0 spaces/unit.
+This information could not be located based on an online review of the San Diego Municipal Code.
Source: San Diego Municipal Code. Chapter 14. Table 142-05C. Chapter 15. Table 156-0313-A.

TRANSPORTATION DEMAND MANAGEMENT

Based on a project's ranking for vehicle trip reduction, transportation amenities are required for projects within TPA's. The transportation amenities are features provided by a development that reduces vehicle trips and inform, educate, and incentivize transit use, biking, walking, and ridesharing.[34]

A Transportation Amenity Score is assigned to each project based on factors related to bedroom ratio, jobs-housing score, environmental priority index score, and transit commute score. Depending on the Score, a certain number of transportation amenities must be provided.

The transportation amenities requirement does not apply to residential developments in Downtown San Diego or residential developments with at least 20 percent Affordable units.

PROGRAMMATIC ELEMENTS

The following programmatic elements are included in the menu of options:

- Provide transit pass subsidies for residents within the development
- Provide an on-site bicycle fleet
- Provide an on-site fleet of micro mobility vehicles

DESIGN ELEMENTS

The following design elements are included in the menu of options:

- Pedestrian scale lighting
- Sidewalk widening to 6 feet along property frontage and sidewalk widening to 10 feet near corners of intersection to allow for ADA required widths
- Installation of transit shelters and/or benches
- On-site bicycle repair station
- Child transportation storage for items such as car seats and strollers
- Provide a secure area for receipt of deliveries
- Construct and maintain a commercial space that is reserved for a healthy food facility within a development
- Provide dedicated micro mobility spaces (including charging infrastructure) at a rate of 10 percent of the total number of dwelling units (minimum of two spaces)
- Construct and maintain an outdoor fitness circuit
- Construct and maintain a commercial space that is reserved for a child care center
- Provide co-working space
- Provide storage for accessibility/mobility devices for people with disabilities
- Install and maintain an on-site kiosk or information center with transit and rideshare information
- Provide a bicycle fleet storage area

[34] *Land Development Manual Appendix Q. City of San Diego. March 25, 2019.* https://www.sandiego.gov/sites/default/files/ldm_appendix_q_0.pdf

TDM PROGRAM ADMINISTRATION

The Transportation Amenities requirements are within the San Diego Municipal Code Chapter 14: General Regulations, Article 2 General Development Regulations, Division 5 Parking Regulations. The Planning Department developed the Planning Department's Transportation Amenity Score Calculator as a tool to calculate the Transportation Amenity Score by inputting a project's Assessor Parcel Number, total number of dwelling units, and total number of bedrooms. The Developer Services Department is responsible for reviewing the transportation amenities plan proposed by applicants.

UNBUNDLED PARKING

The ordinance requires any parking spaces that are provided for projects within TPA's and in Downtown San Diego to be unbundled, meaning that the cost of parking must be paid separately and optional from the purchase price or rent. The unbundling requirement does not apply to developments with four or fewer units or those providing at least 20 percent Affordable units.[35]

BICYCLE PARKING

San Diego has bicycle parking requirements for residential developments based on the number of bedrooms provided:[36]

- Studio – 0.3 space/ unit
- 1 bedroom – 0.4 space/unit
- 2 bedrooms – 0.5 space/unit
- 3-4 bedrooms – 0.6 space/unit
- 5+ bedrooms – 1 space/unit

IMPETUS/GOALS FOR PARKING POLICY

Per the City of San Diego Planning Department staff report, the City initiated the parking amendments for properties within the TPA with the following goals in mind:[37]

- **Increasing housing affordability and supply**
- Creating communities as places to live and work
- Reducing an individual's reliance on cars, which not only reduces the vehicle-generating greenhouse gas emissions, but also further reduces vehicular congestion on the surrounding roadway for all residents.

To inform the recommendations, the City conducted a data-informed effort to determine how to best reform the City's parking requirements. This involved a technical peer city review, testing, policy benchmarking, review of recent legislation, and informational interviews. The study showed an oversupply of parking within multi-family

[35] *Housing SF: Proposed Parking Requirement Regulatory Reform for Multifamily Residential Development in Transit Priority Areas.* City of San Diego Staff Report. January 16, 2019. https://onbase.sandiego.gov/OnBaseAgendaOnline/Documents/ViewDocument/Staff%20Report.docx.pdf?meetingId=1445&documentType=Agenda&itemId=33667&publishId=156182&isSection=false

[36] *San Diego Municipal Code. Chapter 14. Table 142-05C.*

[37] *Housing SF: Proposed Parking Requirement Regulatory Reform for Multifamily Residential Development in Transit Priority Areas.* City of San Diego Staff Report. January 16, 2019. https://onbase.sandiego.gov/OnBaseAgendaOnline/Documents/ViewDocument/Staff%20Report.docx.pdf?meetingId=1445&documentType=Agenda&itemId=33667&publishId=156182&isSection=false

residential developments. The study also showed the importance of removing regulatory barriers associated with parking to increase housing production and reduce housing costs.

POLICY OUTCOMES

San Diego has a density bonus program, which allows for an increase in development density in exchange for setting aside a percentage of the units as Affordable housing. In 2016 and in 2018, the City strengthened its existing density bonus program, making it more attractive to developers. According to a Streetsblog Cal article, after San Diego passed the parking reform in 2019, its density bonus program produced more housing than before the passage of the parking reform.[38] The program produced more market-rate housing, more Affordable housing in 100 percent Affordable buildings, and more Affordable housing in mixed-income projects.

In 2020, one year after the parking reform was implemented, there was a fivefold increase in the total number of homes permitted through San Diego's density bonus program. A record-high 3,283 homes were built using the density bonus program in 2020. The program produced over 1,500 Affordable units in 2020, six times more than 2019. Most of this growth in Affordable units occurred in 100 percent Affordable buildings: 1,323 out of the 1,564 Affordable units permitted in density bonus projects in 2020. Total housing production citywide also rose by 24 percent.

The Streetsblog article cites several factors that may have contributed to this increase in housing production including:

- Developers and regulators became more comfortable with the density bonus process.
- Rising rents and low interest rates made more projects feasible.
- Parking reform likely played a role, in particular, the reform helped to make 100 percent Affordable projects more economically viable.

[38] *Parking Requirements Are Not a Useful Bargaining Chip for Increasing Affordable Housing.* Streetsblog Cal. Anthony Dedousis, Mott Smith, and Michael Manville. May 19, 2021. https://cal.streetsblog.org/2021/05/19/parking-requirements-are-not-a-useful-bargaining-chip-for-increasing-affordable-housing/

OAKLAND

POLICY(IES) ENACTED

ELIMINATION OR REDUCTION OF PARKING MINIMUMS AND INSTITUTION OF PARKING MAXIMUMS

In 2016, the City of Oakland updated its parking requirements, which included the following key provisions for multi-family housing:[39]

- Eliminated residential parking requirements in Downtown Oakland (previously, 1 space/unit was required).
- Instituted a parking maximum of 1.25 spaces per unit for residential uses in Downtown Oakland.
- Allowed for a reduction in the parking requirement for multi-family developments for ten or more units by 50 percent using the following:
    - Provision of car sharing space (onsite) – 20 percent reduction
    - Provision of car sharing spaces within 600 feet – 10 percent reduction
    - Transit allowance provided for each unit – 10 percent reduction
    - If the project is ½ mile of a Major Transit Stop – 30 percent reduction
- Affordable housing reductions
    - Required parking is 0.5 spaces per unit for Affordable housing units within ½ mile of a major transit stop, consistent with state law.
    - Required parking is 0.75 spaces per unit for all other Affordable housing.
- Instituted a maximum of 1.25 spaces per unit in Transit Oriented Development zones.
- Allowed for off-site parking for residential land uses in all commercial and high density residential zones (Allowed by right if off-site parking is within 600 feet and is located on a developed lot; otherwise only permitted upon granting of a conditional use permit).
- Reduced parking requirements in medium-density residential zones found in transit-accessible areas and near major arterials.

Table 7, on the following page, summarizes the parking requirements for residential uses in Oakland after the implementation of the parking reforms.

[39] *Summary of the Off-Street Parking and Loading Update.* August 26, 2016. http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak060448.pdf

Table 7: City of Oakland Off-Street Parking Requirements for Residential Uses

Housing Type	Parking Minimums		Parking Maximums
	Downtown Oakland and Select Zones[1]	Other zones (ratio ranges depending on the zone)	Downtown Oakland and Select Zones[3] (spaces/unit)
Two-Family and Multi-Family Development	0	0.5-1	1.25
One-Family Dwelling	0	0.5-2	1.25
Secondary Unit	0	1-2[2]	1.25
Rooming House	0	0-0.5	0.63
Micro-Living Quarters	N/A	0	+
Mobile Home	0	1.25	+
Residential Care (per employee on-site)	0.33[4]	0.33[4]	+
Emergency Shelter	0.33[4]	0.33[4]	+

[1] Select zones include Civic Center Commercial Zone and Lake Merritt Station Area District Zone.
[2] No parking required for secondary units entirely within an existing one-family dwelling facility or existing detached accessory structure.
[3] Select zones include Civic Center Commercial Zone, Lake Merritt Station Area District Zone, and Coliseum Area District Zone.
[4] Plus one space for each facility vehicle.
+This information could not be located based on an online review of the Oakland Planning Code.
Source: Oakland Planning Code. Chapter 17.116.

The required parking can be reduced with the provision of senior housing at the following rate:

- 75 percent for each dwelling unit that is regularly occupied by at least one individual who is at least 55 years or older or is physically handicapped.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Parking requirements can be reduced by up to 50 percent if certain TDM measures are put into place.[40] Any project that is within a Transit Accessible Area receives a 30 percent reduction in the parking requirement. The reduction allowances for TDM provisions are included in the Oakland Planning Code, Chapter 17.116 Off-Street Parking and Loading Requirements.

PROGRAMMATIC ELEMENTS

The following programmatic elements allow for parking reductions, per the zoning ordinance:

- Provision of a monthly transit benefit to each dwelling unit receives a 10 percent reduction in the parking requirement.

DESIGN ELEMENTS

The following design elements allow for parking reductions, per the zoning ordinance:

- On-site provision of car share spaces receives a 20 percent reduction in the parking requirement (described in the Car Share Parking Section).

[40] *Oakland Planning Code. Chapter 17.116*

- Off-site provision of car share spaces receives a 10 percent reduction in the parking requirement (described in the Car Share Parking Section).

UNBUNDLED PARKING

The 2016 parking reform instituted a requirement for building owners to sell or rent parking separate from a unit for all multifamily residential developments of 10 or more units citywide.[41]

BICYCLE PARKING

For multi-family residential units, the following bicycle parking requirements apply:[42]

- Multi-family dwelling
  - 1 short-term space per 20 dwelling units (minimum of 2 spaces)[43]
  - For developments without private garage for each unit – 1 long term space for each 4 dwelling units (minimum of 2 spaces) is also required.
- Senior Housing
  - 1 short-term space per 20 dwelling units (minimum of 2 spaces)
  - 1 long-term space per 10 dwelling units (minimum of 2 spaces)
- Rooming House
  - 1 long-term space per 8 residents (minimum of 2 spaces)
- Mobile Home
  - 1 long-term space per 20 units

CAR SHARE PARKING

Provision of on-site car share parking spaces can reduce the parking requirement by 20 percent and off-site car share parking spaces can reduce the parking requirement by 10 percent at the following levels:[44]

- 5-100 units – 1 car share space
- 101-300 units – 2 car share spaces
- Each additional 200 units – 1 additional car share space

Car share parking spaces are required for multi-family residential developments of 50 or more units in Downtown Oakland at the following ratios:

- 50-200 units – 1 space required
- 201-40 unit – 2 spaces required
- Each additional 200 units – 1 additional space

Required car share spaces must be made available by one of two mechanisms:

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[41] *Summary of the Off-Street Parking and Loading Update.* August 26, 2016. http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak060448.pdf

[42] *Oakland Planning Code. Chapter 17.117*

[43] For Broadway Valdez District Commercial Zones – 1 short-term space per 15 dwelling units.

[44] *Oakland Planning Code. Chapter 17.116.*

1. Private car share, operated by the property owner or homeowner's association, provided with the development. Each car share space is assigned to a vehicle owned and maintained by the property owner or homeowner's association for use by residents in the development.
2. Provide, at no cost, car share space to a public car share organization for purposes of providing car share services for its car share subscribers. Car share vehicle should be accessible to both non-resident and resident subscribers.

IMPETUS/GOALS FOR PARKING POLICY

The City lists the following reasons for implementation of their parking policies in a document summarizing the parking policy update:[45]

- The previously prescribed minimum parking requirements represented a "one size fits all" approach when in reality parking demand varies by project. In many cases, minimum requirements result in too much parking.
- In 2011, as part of a citywide zoning update, a provision was put in place such that the amount of parking for multi-family housing developments could be reduced by up to 50 percent with a Conditional Use Permit (CUP) in Downtown Oakland and in commercial corridors. However, the requirement for a CUP discouraged the use of this provision and there wasn't guidance provided on how to determine the appropriate size for the parking reduction. Therefore, as part of the 2016 update, the City clarified how to obtain parking reductions.
- Previously, Affordable housing developments had the same parking requirements as market rate developments. However, data shows that car ownership and parking demand among Affordable housing units is lower than market rate projects. Requiring parking minimums that exceed parking demand leads to increased housing costs, occupying valuable real estate that could instead by used for additional housing units. Further State law recently changed with the passage of AB 744, which does not allow local governments to require more than one-half a space per Affordable housing unit that is within ½ mile of a Major Transit Stop.
- Bundling of parking with the cost of housing hides the cost of the parking space and makes the cost of owning a car less expensive relative to other transportation modes. Residents that do not have cars can save money by foregoing parking. Studies have shown that unbundling reduces the number of parking spaces required in a building.
- The City has a transit-first policy and has encouraged the creation of Transit Oriented Development, particularly around many of the Bay Area Rapid Transit (BART) stations within the City. However, lower minimums do not prevent developers from building excessive parking to serve BART uses. Excess parking is not consistent with developments oriented toward transit use.
- In some cases, providing required parking on the same lot as the land use creates visual or site design impacts. In these cases, it may be preferable to locate required parking on another lot.
- The RM zones are medium-density residential zones found in transit-accessible areas and near major arterials. These areas a mix of single-family homes, duplexes, and small apartment buildings. The previous requirement of 1.5 spaces/unit discouraged appropriate residential infill development.
- A 21-foot aisle width standard has determined to be adequate for residential parking, where residents are more familiar with the maneuvering dimensions of their parking lot.

[45] *Summary of the Off-Street Parking and Loading Update.* August 26, 2016. http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak060448.pdf

In 2014, TransForm, an Oakland-based transportation and housing advocacy non-profit organization, released the GreenTrip parking database, which created a report showing there was a 30 percent vacancy rate in parking facilities at 80 apartment buildings across the Bay Area, representing $198 million in built parking that was going unused.[46]

POLICY OUTCOMES

In 2019, Oakland added approximately 6,800 housing units (almost 15 times the number completed in 2018 and more than three times the number of units produced between 2013 and 2018, combined). A City Journal article attributes this increase in housing to the fact in 2014/2015, the City passed a series of neighborhood plans in and around downtown that relaxed zoning and parking requirements, making housing cheaper and easier to build.[47]

[46] *Oakland council approves sweeping reductions to parking for new developments.* Erin Baldassari. East Bay Times. Published September 20, 2016, updated March 6, 2017. https://www.eastbaytimes.com/2016/09/20/oakland-council-approves-sweeping-reductions-to-parking-for-new-developments/

[47] *If You Let Them, They Will Build.* Phillip Sprincin. City Journal. November 29, 2019. https://www.city-journal.org/oakland-rezoning-california-housing

PORTLAND

POLICY(IES) ENACTED

ELIMINATION OR REDUCTION OF PARKING MINIMUMS

The City of Portland has the following parking policies in place:

- There are no minimum parking ratios for any land uses in the Central City. The Central City has parking maximums.
- Starting in 2002/2003, development projects within 1,500 feet of a transit station or 500 feet of frequent transit service (defined as bus service every 20 minutes) were exempt from minimum parking requirements.
- As buildings began to proliferate under the 2002/2003 provision, neighborhoods throughout the City expressed concern about how the lack of off-street parking could impact surrounding single-family residential areas. In response, in 2013, the City adopted new minimum parking requirements for multi-family units near transit:
    - Developments with <30 dwelling units: no parking required
    - 31-40 units: 0.2 space/unit
    - 41-50 units: 0.25 space/unit
    - 51+ units: 0.33 space/unit
- Provisions for developments that provide Affordable housing units:
    - In 2016, the City waived minimum parking requirements for developments near transit that provide Affordable housing units.
    - In 2016, the City adopted the Inclusionary Housing Program, requiring all residential buildings proposing 20 or more new units to provide a certain percentage of Affordable units.
    - In 2019, the City waived minimum parking requirements for developments, regardless of location, that provide Affordable housing units in compliance with the City's Inclusionary Housing standards.

Table 8, on the following page, summarizes the current parking minimum and maximum requirements for multifamily development in the City of Portland.

Table 8: City of Portland Off-Street Parking Requirements for Residential Uses

Housing Type	Parking Minimums (spaces/unit, unless otherwise noted)				Parking Maximums (spaces/unit, unless otherwise noted)		
	Central City and Certain Plan Districts	Close to Transit[1]	Far from Transit[2] (Certain Districts)	Comply with Inclusionary Housing Policy[3]	More than 25% Surface Parking Close to Transit[4]	More than 25% Surface Parking Far from Transit	75% or more Structured Parking
Household Living[5]							
<30	0	0	0.5	0	1.35[6]	1.69[6]	N/A
31-40	0	0.2	0.5	0	1.35	1.69	N/A
41-50	0	0.25	0.5	0	1.35	1.69	N/A
51+	0	0.33	0.5	0	1.35	1.69	N/A
Group Living (per bedroom)	0	0	0.25	+	+	+	+

[1] Defined as sites located 1,500 feet of less from a transit station or 500 feet or less from a transit station with 20-minute peak hour service.
[2] Defined as sites located more than 1,500 feet from a transit station, or more than 500 feet from a transit street with 20-minute peak hour service.
[3] Exemption from parking minimums does not apply if the applicant pays a fee-in-lieu of complying with the requirements of the Inclusionary Housing ordinance or makes a payment into the Affordable Housing Fund in exchange for bonus density or FAR.
[4] Site must also be in a commercial/mixed use or multi-dwelling zone.
[5] No parking is required for household living uses in the single-dwelling zones.
[6] Houses, attached houses and duplexes are exempt.
+ This information could not be located based on an online review of the Portland Municipal Code.
Source: Portland Zoning Code. Title 33. Chapter 33.266.

Minimum parking requirements can be reduced by up to 50 percent, using combinations of the following provisions:[48]

- One space reduction for every 12-inch diameter tree that is preserved (reduction of up to 2 spaces, or 10 percent of the total required parking).
- One space reduction for every 5 non-required bicycle parking spaces (reduction of up to 25 percent of the total required parking).
- Transit-supportive plazas may replace up to 10 percent of required parking, provided that at least 20 parking spaces are required and certain design standards are met.
- One space for every 4 motorcycle spaces provided (reduction of up to 5 spaces or 5 percent of the total required parking)
- Two spaces for every car sharing (e.g., Zipcar) space provided (reduction of up to 25 percent of the total required parking).
- Three spaces for every 15-dock bike sharing station, with a further one-space reduction for each additional 4 docks (reduction of up to 25 percent of the total required parking – this provision is not currently available due to the lack of a bike sharing operator).

For Affordable housing, the minimum number of required spaces can be reduced to zero when the applicant demonstrates compliance with the City's Inclusionary Housing Standards.

[48] *Portland Zoning Code. Title 33. Chapter 33.266.*

TRANSPORTATION DEMAND MANAGEMENT (TDM)

In the commercial/mixed-use and multi-dwelling zoning districts, a TDM plan is required when new development includes more than 10 dwelling units, is located in a commercial/mixed-use or multi-family dwelling unit zone, and is close to transit (500 feet from a transit station with 20-minute peak hour service, or 1,500 feet from a transit station). The TDM requirement is located in Title 33 Portland Zoning Code, 33.130.290 Parking, Loading, and Transportation Demand Management. The TDM program is administered by the Portland Bureau of Transportation. Sites located in the Central City are exempt from the TDM Plan requirement.

Applicants have two options to fulfill the TDM requirement:[49]

1. Pre-approved TDM Plan – an administrative process
2. Custom TDM Plan – land use review

The components of the Pre-Approved TDM plan, include:

- Multimodal financial incentives – a one-time fee equivalent to the value of an annual transit pass for each dwelling unit. The fee is held in a City account during construction, and then used for multimodal incentives for building tenants at occupancy. The applicant works with Portland Bureau of Transportation to select the distribution plan for multimodal incentive packages to tenants for the first four years of building occupancy. Examples of multimodal incentives could include:
    - Bike share membership or ride credits
    - Transit pass
    - Streetcar pass
    - Car share incentives
    - Carpool incentives
    - Real time transportation information displays
    - Tailored transportation information and marketing services
    - Unbundled parking costs from rental costs
    - Bicycle parking – above and beyond existing code-required parking
    - Bike share station open and accessible to the public
    - Bicycle repair station and tools
    - Car share fleet and parking spaces
- Transportation options information – provided by the Portland Bureau of Transportation and distributed to tenants for the first four years of building occupancy.
- Annual transportation survey – administered by the Portland Bureau of Transportation, with property management assistance, of building tenants for the first four years of building occupancy.

If an applicant chooses to provide a Custom TDM Plan, an applicant is required to create their own TDM Plan, get it approved based on the land use approval criteria, and implement the approved TDM strategies at building occupancy.

[49] Portland Bureau of Transportation website, accessed November 29, 2021: https://www.portlandoregon.gov/transportation/75487

UNBUNDLED PARKING

As discussed in the TDM section, unbundled parking is one of the strategies allowed for the City's TDM Plan requirements.

BICYCLE PARKING

Applicants can get a reduction of one required space for every 5 non-required bicycle parking spaces (reduction of up to 25 percent of the total required parking).

Applicant can also receive a three-space reduction for every 15-dock bike sharing station, with a further one-space reduction for each additional 4 docks (reduction of up to 25 percent of the total required parking – this provision is not currently available due to the lack of a bike sharing operator).

For multi-family housing units, the following bicycle parking requirements apply:[50]

- Central City
  - 1.5 long-term spaces per unit
  - 2 spaces or 1 per 20 units
- Outside the Central City
  - 1.1 long-term spaces per unit
  - 2 space or 1 per 20 units

CAR SHARE PARKING

Car share parking spaces may substitute for required parking:[51]

- For every car-sharing parking space that is provided, the parking requirement is reduced by 2 spaces, up to a maximum of 25 percent of the required spaces.
- The car-sharing parking spaces must be shown on the building plans.
- A copy of the car-sharing agreement between the property owner and the car-sharing company must be provided to the City.

IMPETUS/GOALS FOR PARKING POLICY

Per the City's , the following policy for off-street parking is listed:[52]

> *Policy 9.51 Off-street parking. Limit the development of new parking spaces to achieve land use, transportation, and environmental goals. Regulate off-street parking to achieve mode share objectives, promote compact and walkable urban form, encourage lower rates of car ownership, and promote the vitality of commercial and employment areas. Utilize transportation demand management and pricing of parking in areas with high parking demand.*

[50] *Portland Zoning Code. Title 33. Chapter 33.266.*
[51] *Portland Zoning Code. Title 33. Chapter 33.266.*
[52] *City of Portland Off-Street Parking Management & Guiding Policies.* City of Portland Bureau of Transportation. https://www.portlandoregon.gov/transportation/article/547704

POLICY OUTCOMES

As a result of the 2002/2003 elimination of parking requirements for sites near transit, between 2006 and 2012, there were approximately 1,270 dwelling units built without dedicated off-street parking.[53]

As a result of the 2013 reimposition of parking requirements (for multi-family projects with more than 30 units), a study conducted by Portlanders for Parking Reform found that the number of developments proposed with exactly 30 units increased between November 2014 and June 2016.[54] The article hypothesizes that developers were building 30-unit developments in order to avoid building the required parking.

[53] *City of Portland Off-Street Parking Management & Guiding Policies.* City of Portland Bureau of Transportation. https://www.portlandoregon.gov/transportation/article/547704
[54] *Did Portland City Council Suppress Housing Supply in 2013?* TonyJ. PDXShoupistas. June 28, 2016. https://pdxshoupistas.com/did-portland-city-council-suppress-housing-supply/

MINNEAPOLIS

POLICY(IES) ENACTED

The City of Minneapolis has passed several parking policy reforms over the last twelve years that have impacted multi-family residential uses:[55]

- In 2009, Minneapolis implemented a parking reform package that included:
  - Reduced parking requirements for commercial uses, requiring zero spaces for smaller establishments.
  - Maximum parking standards adopted citywide.
  - Minimum bicycle parking requirements established for most uses.
  - Eliminated minimum parking requirements in the downtown zoning districts.
- In 2015, Minneapolis had another parking reform package that included:
  - Elimination of parking requirements for residential buildings with 3-50 units located near high frequency transit, 50 percent reduction for larger residential buildings.
  - 10 percent reduction in parking requirements for residential buildings in proximity to standard transit service.
- In 2019, the Minneapolis 2040 plan was adopted, signaling the City's intent to eliminate parking minimums, evaluate and institute parking maximums, and revamp the travel demand management ordinance.

ELIMINATION OF PARKING REQUIREMENTS CITYWIDE AND EXPANSION OF PARKING MAXIMUMS

The City eliminated parking requirements on all new developments citywide in 2021 to align with the City's goals outlined in the Minneapolis 2040 Plan and the Transportation Action Plan. Prior to the update, the City required parking for some uses, while some areas of the City have provisions that allowed for a reduction or elimination of requirements.

Prior to the legislation, the residential parking maximum was 1.5 space per dwelling unit in Downtown Minneapolis, with no maximum elsewhere in the City. The ordinance included expansion of residential parking maximums:

- 1.5 spaces per dwelling unit in Transit and Core built form districts
- 2 spaces per dwelling unit elsewhere in the City

Table 9, on the following page, summarizes the residential parking minimums and maximums in the City of Minneapolis.

[55] *Zoning Code Text Amendment Summary.* CPED Staff Report. April 12, 2021. https://lims.minneapolismn.gov/Download/FileV2/23539/Off-Street-Parking-and-Travel-Demand-Management-Staff-Report.pdf

Table 9: City of Minneapolis Off-Street Parking Requirements for Residential Uses

Housing Type	Parking Minimums	Parking Maximums (spaces per unit, unless noted otherwise)	
	Citywide	Transit and Core Districts (spaces per unit)	Citywide (spaces per unit)
Multi-family residential (4+ units)	0	1.5	2
Single-, two-, or three-family dwellings	0	N/A	N/A
Congregate Living[1]	0	1	1
Community Residential Facility	0	1	1
Board and Care Home/Nursing Home/Assisted Living	0	1	1
Community Correctional Facility	0	1	1
Dormitory	0	1	1
Emergency Shelter	0	1	1
Faculty House	0	1	1
Fraternity or Sorority	0	1	1
Hospitality Residence	0	1	1
Inebriate Housing	0	1	1
Intentional Community[1]	0	1.5	2
Overnight Shelter	0	*	*
Residential Hospice (per bed)	0	1	1
Single Room Occupancy Housing (per rooming unit)	0	0.5	0.5
Supportive Housing (per bed)	0	1	1

[1] Group living with 2 or more persons living together as a single household, sharing in the management of resources and household expenses.
*Approved by a CUP.
Source: Minneapolis Code of Ordinances. Title 20. Chapter 541. Article II. Table 541-1.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Along with the elimination of parking requirements citywide in 2021, the City expanded its existing TDM program (the City calls the program Travel Demand Management).[56] Before the legislation, TDM plans were only required for projects with 100,000 square feet or more of new or additional non-residential gross floor area. With the elimination of parking requirements, the revised ordinance captures more development types and scales in the TDM process. The TDM ordinance expanded the three types of TDM standards:

- Minor – Residential projects with 50-249 units
- Major – residential projects with 250 or more units.
- Discretionary – a TDM plan can be required of any development when determined by the Planning Director that the proposal presents unique transportation challenges due to the nature or use of the location.

[56] *Zoning Code Text Amendment Summary.* CPED Staff Report. April 12, 2021. https://lims.minneapolismn.gov/Download/FileV2/23539/Off-Street-Parking-and-Travel-Demand-Management-Staff-Report.pdf

The TDM process is geared toward shaping development that results in reduced automobile trips, increased walking, cycling, and transit trips and reduced greenhouse gas emissions. Developments triggering a required TDM process must implement strategies (provided as a menu of options) totaling a points value based on the size and use. Strategies include both programmatic and design strategies.

TDM PROGRAM ADMINISTRATION

The TDM requirements in located in Title 20 Zoning Code, Chapter 541 Off-Street Parking, Loading, and Mobility. The Planning Director, in consultation with the City Engineer, conducts the administrative review of the TDM plan. The Planning Director recommends to the Zoning Administrator any mitigating measures deemed reasonable and necessary and include such recommendations as a condition of the issuance of any building permit or zoning certificate.

PROGRAMMATIC ELEMENTS

The following programmatic elements are included in the menu of options that could be used to satisfy the TDM requirements:

- Provide unlimited-ride transit passes.
- Unbundle parking for rental or purchase of housing units.
- Provide shared vehicles for the development.
- Valet parking

DESIGN ELEMENTS

The following design elements are included in the menu of options that could be used to satisfy the TDM requirements:

- Provide pedestrian realm improvements – the development must provide a minimum of two of the following three enhancements:
    - Widened sidewalk that brings a sub-standard space into compliance with the City of Minneapolis Street Design Guide. Sidewalks must be paved with materials that meet or exceed City standards for sidewalk finishes.
    - Street trees and landscaping installed in an enhanced planting bed.
    - Street furniture appropriate for the site's context, not disrupting the pedestrian throughway.
- Provide zero vehicle parking or limited vehicle parking for the development.
- Real-time transit information
- Mobility hubs

UNBUNDLED PARKING

Unbundling the cost of parking from the rental or purchase prices of the housing units is one of the strategies that applicants can elect as part of their TDM plan.[57]

[57] *Zoning Code Text Amendment Summary.* CPED Staff Report. April 12, 2021. https://lims.minneapolismn.gov/Download/FileV2/23539/Off-Street-Parking-and-Travel-Demand-Management-Staff-Report.pdf

BICYCLE PARKING

Multi-family developments with four or more units are required to have at least one bicycle parking space per unit. 90 percent of the required bicycle parking should meet the standards for long-term bicycle parking.[58]

CAR SHARE PARKING

Providing shared vehicles for the development is one of the strategies that applicants can elect as part of their TDM plan.

IMPETUS/GOALS FOR PARKING POLICY

The following rationale for the parking policy is provided in the City's staff report prepared for the City Planning Commission:[59]

- *The cost of producing parking is paid for by residential owners and renters, whether they use it or not. This results in inflated housing costs, particularly for lower income households.*
- *Providing an overabundance of parking incentivizes automobile use at the expense of more efficient and environmentally friendly forms of transportation. This ultimately results in greater demands being placed on roadways and an increase in greenhouse gas emissions.*
- *Dedication of large portions of land to inactive uses such as parking reduces the efficiency with which land is used, reducing the ability of residents to satisfy their daily transportation needs within a small geographic footprint.*
- *Walkable urban design best practices are made less effective when they must accommodate parking, drive aisles, and curb cuts for automobiles.*
- *Parking reform has the added benefit of reducing the number of staff hours spent administering parking-related provisions in the zoning ordinance, with the intended trade-off of spending more time working with developers and businesses to meet the City's transportation goals.*
- *Regulatory relief for businesses is also intended with these changes. Eliminating requirements can make it easier for businesses to establish themselves in existing properties throughout Minneapolis.*
- *Elimination of minimum parking requirements removes a significant barrier to re-use of older buildings that were originally constructed with little or no off-street parking. A substantial amount of the city's historic fabric has been replaced to provide parking for both older and newer buildings or to provide public parking.*

POLICY OUTCOMES

MinnPost journalist Nick Magrino conducted an analysis of development approvals after the City's 2015 parking reform, which allowed residential projects near transit to be built with less off-street parking.[60] He analyzed the ratio of parking spaces to housing units in multi-family rental projects built between 2012 and 2017 outside of Downtown Minneapolis and the University District. He found that after the 2015 parking reform the ratio of parking spaces to number of units decreased.

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[58] *Minneapolis Code of Ordinances. Title 20. Chapter 541. Article II. Table 541-2.*

[59] *Zoning Code Text Amendment Summary.* CPED Staff Report. April 12, 2021. https://lims.minneapolismn.gov/Download/FileV2/23539/Off-Street-Parking-and-Travel-Demand-Management-Staff-Report.pdf

[60] *What Happens When You Ease Parking Requirements for New Housing.* Nick Magrino. January 30, 2018. https://www.nickmagrino.com/blog/2018/1/30/when-you-dont-have-to-build-so-much-parking

He also found that prior to enacting the parking reform, the design and rent of many residential developments tended to be largely driven by parking. In areas outside of downtown, due to land costs, it made the most financial sense for developers to build underground parking structures, which necessitated building more than 100 housing units to make the projects feasible. After the parking reform, he found that a new type of housing project was being constructed: residential developments with less than 100 units and about one parking space for every two units. He concluded that these smaller developments were at least in part made possible by reduced parking requirements. Developers could build the needed parking without needing to build an expensive underground parking structure.

He further concludes that residential rents can be lowered as a result of the cost savings from building an underground parking structure. Lower rents for newly constructed multifamily units further ease the rent pressure on existing housing stock.

ADDITIONAL CITIES RESEARCHED

Walker also researched the parking policies of the following cities, which were not included in the case study analysis:

- West Hollywood – The City eliminated all parking requirements if 100 percent of the units are Affordable. Since the ordinance does not apply to developments other than those that are 100 percent Affordable, Walker excluded this City from the analysis.
- Chicago – Chicago passed its first Transit Oriented Development (TOD) ordinance in 2013 and updated the ordinance in 2015. However, the ordinance only applies to developments located in close proximity to transit and located along designated "pedestrian streets." Chicago's pedestrian streets are located in very dense, urban and walkable areas in Downtown. Given that the ordinance is specific to these locations, Walker excluded this City from the analysis.

MEMORANDUM

CASE STUDY MEMORANDUM

37-009377.00

DATE:	April 13, 2022
TO:	Alyson Stewart
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ADDRESS:	320 W Temple Street
CITY/STATE:	Los Angeles, CA
COPY TO:	Bruce Durbin
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PROJECT NAME:	LA County Residential Parking Study
PROJECT NUMBER:	37-009377.00

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The following memorandum comprises Task 4.4 Case Study Memorandum of the referenced parking study. This memo includes an analysis of the parking policies of four (4) jurisdictions with high costs of housing that have enacted reforms for their parking requirements for multi-family housing. These cities were selected from the cities discussed in the previous analysis presented on this subject (Task 4.2. Parking Program Case Study Analysis dated January 21, 2022):

- Santa Monica, CA
- San Francisco, CA
- Berkeley, CA
- Los Angeles, CA
- San Diego, CA
- Oakland, CA
- Portland, OR
- Minneapolis, MN

The four (4) jurisdictions that were analyzed included:

- Minneapolis
  - Rationale for selecting City: The City reduced requirements citywide, has a diversity of neighborhood density similar to LA County, and implemented TDM ordinance updates in conjunction with the parking ordinance update.
- Berkeley
  - Rationale for selecting City: The ordinance was enacted citywide, in areas of varying densities. The City conducted data collection at residential properties to inform their recommendations.
- Oakland
  - Rationale for selecting City: Oakland allows for a 50 percent reduction in the number of required parking spaces for multi-family developments citywide (in areas of varying densities) in exchange for provision of TDM elements and for proximity to transit.
- San Diego
  - Rationale for selecting City: San Diego eliminated parking requirements across the City (both urban and suburban areas) near transit. San Diego also implemented transportation amenity requirements to promote usage of alternative modes of transportation.

Walker interviewed City staff from each of the cities listed above to gain additional background on the parking policies enacted. This memo primarily reviews the findings from these interviews and is intended to supplement the findings from the Task 4.2 Parking Program Case Study Analysis memo.

MINNEAPOLIS

As discussed in the Task 4.2 Memorandum, the City of Minneapolis has passed several parking policy reforms over the last 13 years that have impacted multi-family residential uses:[1]

- In 2009, Minneapolis implemented a parking reform package that included:
  - Reduced parking requirements for commercial uses, requiring zero spaces for smaller establishments.
  - Maximum number of parking spaces allowed (parking "maximums") adopted citywide.
  - Minimum bicycle parking requirements established for most uses.
  - Eliminated minimum parking requirements in the downtown zoning districts.
- In 2015, Minneapolis passed another parking reform package that included:
  - Elimination of parking requirements for residential buildings with 3-50 units located near high frequency transit, 50 percent reduction for larger residential buildings.
  - 10 percent reduction in parking requirements for residential buildings in proximity to standard transit service.
- In 2019, the Minneapolis 2040 plan was adopted, signaling the City's intent to eliminate parking minimums, evaluate and institute parking maximums, and revamp the travel demand management ordinance.
- The City eliminated parking requirements on all new developments citywide in 2021 to align with the City's goals outlined in the Minneapolis 2040 Plan and the Transportation Action Plan.

Walker interviewed City of Minneapolis staff on January 21, 2022 for a more in depth understanding of Minneapolis' parking policies. The following key themes were identified:

THE ELIMINATION OF PARKING REQUIREMENTS CITYWIDE WAS A GRADUAL PROCESS

As discussed above, Minneapolis has been enacting parking reforms since 2009. First, requirements were eliminated in the downtown districts. Then, in 2015, parking requirements were eliminated or reduced for residential projects near transit. Since most neighborhoods of the City have good transit access, the City felt that it was logical to eliminate requirements citywide.

ELIMINATION OF REQUIREMENTS WAS BASED ON POLICIES FROM THE MINNEAPOLIS 2040 PLAN

The elimination of parking requirements was based on the vision and policies established as part of the Minneapolis 2040 Plan, which had a two-year public engagement process. There was approximately a two-year gap between the passage of the Minneapolis 2040 Plan and the elimination of parking requirements. There were no specific on-street or off-street parking utilization studies that were completed to inform the policy decision to eliminate requirements.

[1] *Zoning Code Text Amendment Summary.* CPED Staff Report. April 12, 2021. https://lims.minneapolismn.gov/Download/FileV2/23539/Off-Street-Parking-and-Travel-Demand-Management-Staff-Report.pdf

HOUSING PRODUCTION AND AFFORDABILITY WAS A PRIMARY IMPETUS FOR ELIMINATING PARKING MINIMUMS

Producing more housing units and reducing the cost of housing were major factors in the City's decision to eliminate parking requirements. Minneapolis has goals of increasing population levels to the population levels observed in 1950.

Racial equity in housing has been an issue with which the City has struggled. The elimination of parking requirements is expected to make it more feasible to achieve the development outcomes envisioned in Minneapolis 2040, which will advance goals related to eliminating disparities, increasing housing affordability, creating complete neighborhoods, and preserving the City's history.

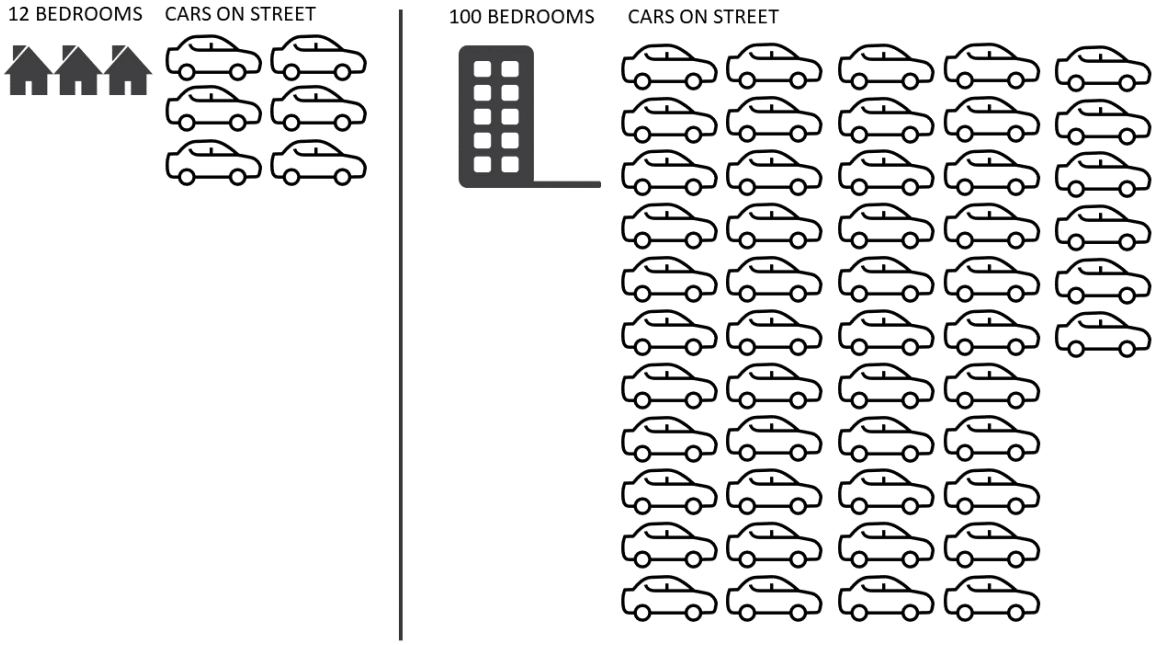
THE CITY HAS EXPERIENCED ISSUES WITH PARKING SPILLOVER ON-STREET

Minneapolis City staff indicated that especially in neighborhoods with free, unregulated on-street parking, parking spillover is an issue. When residential properties have limited parking, demand for on-street parking can increase. The City is considering strategies to manage on-street parking demand, such as establishing parking meter zones with lower rates and a longer duration.

It is worth noting the City explored these approaches to the regulation of on-street parking through residential parking permits for the purpose of addressing concerns regarding parking spillover.

When a residential parking permit district is established per the City's program, each eligible address is identified as part of the documentation and petitioning process. Some residential parking permit district areas have specifically excluded certain residences if those residents either did not want to participate in the program or if the development was a high density building with ample off-street parking.

For example, the City had several instances where groups of single family or duplex units had been demolished and large multi-unit buildings were constructed on the same footprint. In those instances, the City stipulated as part of the development's travel demand management plans (TDMP) that the buildings would not be eligible for resident permits on that street. In many cases, according to City staff, if they had allowed for residents of the new buildings to participate in the residential parking permit plans (buy permits), there would simply not be enough available parking for everyone who needed to park on the street. In illustrative example is that if three properties were demolished with a total of 10-12 bedrooms and replaced by a building with 100 bedrooms, parking demand would increase. Assuming that one vehicle would be parked on street for every two (2) bedrooms, the figure on the following page shows the potential on-street parking impacts:



The management of the parking permit program in this regard was a method by which the City could communicate to developers to "right size" the off-street parking they build. In practice, after the fact, developers may pass building management responsibilities to a property management company. These firms have then approached the City on their residents behalf requesting residential eligibility for permits. In some instances, residents have been directly requesting permits from the City, even if the "no residential parking permit availability" stipulation should be communicated at the time of rental and in the lease.

In California, this type of policy to regulate on-street parking specifically for multifamily residents has become a moot point. California Attorney General Kamala Harris issued an opinion in April 2016 that local authorities may not institute preferential parking regulations that differentiate among residents based on the residents' dwelling type. The opinion was issued in order to clarify the Legislature's delegation of powers under California Vehicle Code section 22507. Section 22507 requires resident-only permits to be available to all residents of adjacent streets, not just residents of a particular dwelling type. For example, a city cannot grant permits to residents of single family and small two- or four-unit dwellings while denying permits to residents of a similarly situated high-density apartment complex.

BERKELEY

As discussed in the Task 4.2 Memorandum, on January 26, 2021, the Berkeley City Council passed an ordinance that eliminated parking requirements for residential properties citywide, with a few exceptions on hillside properties. Before implementation of the policy, developers were previously required to build one (1) parking space per unit in most zoning districts. The City also implemented parking maximums (restrictions on the number of parking spaces that may be built per residential unit) in transit-rich areas. Off-street residential parking cannot be offered at a rate of more than 0.5 space per unit for projects located within 0.25 miles of a high-quality transit corridor.

Walker interviewed City of Berkeley staff on January 24, 2022, to get a more in depth understanding of the city's parking policies. Within the discussion, we identified the following key themes:

REDUCING PARKING REQUIREMENTS WAS A LONG-STANDING CITY GOAL

The Berkeley City Council has had a long-standing interest in reducing parking requirements to stimulate housing production. There was significant political support for the elimination of parking requirements prior to the enactment of the policy. Ultimately the primary impetus for the parking policy reform was reduction in greenhouse gas emissions caused by the transportation sector.

PARKING POLICY FOCUSES ON NEW RESIDENTIAL DEVELOPMENT

The parking policy reform is only focused on new residential development. Existing residential uses and commercial uses are excluded from the policy.

PARKING REFORM WAS ENACTED IN TANDEM WITH TDM POLICY

With the elimination of residential parking requirements, in order to address potential spillover of parking demand to on-street spaces and to give people choices beyond driving and parking in their building, the City enacted transportation demand management (TDM) policies in tandem with parking policies.

The City had a goal to make the TDM process relatively simple. The City established a TDM program with four (4) requirements for all residential projects with 10 or more residential units (1. requirements to build off-street bicycle parking, 2. provide unbundled parking, 3. provide transit passes, and 4. provide real-time transportation displays). The City plans to track the effectiveness of TDM measures in the future, such as verifying whether residents are using the transit passes provided. The City is also interested in ensuring that TDM measures are accessible to persons with disabilities.

The Planning Department administers the TDM program. All four (4) of the required TDM measures are established as conditions of approval for a development project. Projects with 50 percent of more deed restricted Affordable Housing units are exempt from the TDM requirements, including the requirement to unbundle the parking cost from the cost of housing.

UNBUNDLING PARKING COST FROM HOUSING COST

City staff indicated that the requirement to unbundle parking costs from housing costs needed to be crafted in a way that encouraged the cost of housing to be lower than it otherwise would have been if parking was included in the cost of the unit. The language that is included in the City's ordinance is as follows:

Ensure that all parking spaces provided for residents be leased or sold separate from the rental or purchase of dwelling units for the life of the dwelling units, such that potential renters or buyers shall have the option of renting or buying a dwelling unit at a price lower than would be the case if there were a single price for both the dwelling unit and the parking space(s).

HAVING QUANTITATIVE DATA WAS CRITICAL TO SUPPORT THE PARKING POLICY

When formulating its parking policy, the City cited other national studies that demonstrated residential parking supply is typically underutilized, including in King County, Washington and in Washington, DC. In order to demonstrate that this finding was applicable to Berkeley, the City commissioned a residential parking utilization study. The study found that off-street residential parking demand was underutilized. To evaluate the capacity of

on-street parking to absorb potential parking spillover from off-street parking, the City also studied on-street parking demand adjacent to residential developments and found that the on-street parking supply was also underutilized.

IMPLICATIONS OF THE PARKING POLICY REFORM ON THE PREFERENTIAL PARKING PERMIT PROGRAM

The City has an existing preferential parking permit program. With the passage of the parking policy reforms, the City halted the issuance of new permits to residents of new residential developments. The purpose of this policy decision was to encourage residents of large development projects to utilize TDM options prior to parking on-street. However, according to a California Attorney General Opinion in 2016, local authorities may not distinguish between residents based on the type of dwelling in which they live. Therefore, the City subsequently applied the preferential parking permit program to all new development.

OAKLAND

As discussed in the Task 4.2 Memorandum, the City of Oakland updated its parking requirements in 2016, which included the following key provisions for multi-family housing:[2]

- Eliminated residential parking requirements in Downtown Oakland (previously, 1 space/unit was required).
- Instituted a parking maximum of 1.25 spaces per unit for residential uses in Downtown Oakland.
- Allowed for a reduction in the parking requirement for multi-family developments for ten or more units by 50 percent using the following:
    - Provision of car sharing space (onsite) – 20 percent reduction
    - Provision of car sharing spaces within 600 feet – 10 percent reduction
    - Transit allowance provided for each unit – 10 percent reduction
    - If the project is one-half mile from a Major Transit Stop – 30 percent reduction
- Affordable housing reductions
    - Required parking is 0.5 spaces per unit for Affordable housing units within one-half mile of a major transit stop, consistent with state law.
    - Required parking is 0.75 spaces per unit for all other Affordable housing.
- Instituted a maximum of 1.25 spaces per unit in Transit Oriented Development zones.
- Allowed for off-site parking for residential land uses in all commercial and high-density residential zones (Allowed by right if off-site parking is within 600 feet and is located on a developed lot; otherwise only permitted upon granting of a conditional use permit).
- Reduced parking requirements in medium-density residential zones found in transit-accessible areas and near major arterials.

Walker interviewed City of Oakland staff on February 9, 2022, to get a more in depth understanding of Oakland's parking policies. As a result of the discussion, the following key themes were discussed:

[2] *Summary of the Off-Street Parking and Loading Update.* August 26, 2016. http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak060448.pdf

THE CITY'S CLIMATE ACTION PLAN WAS THE PRIMARY IMPETUS TO UPDATE PARKING REQUIREMENTS

One of the implementation strategies in the City's Equitable Climate Action Plan was to "remove parking minimums and establish parking maximums where feasible, ensuring public safety and accessibility." The parking requirement update was driven by this implementation strategy.

LOWER CAR OWNERSHIP NEAR TRANSIT

Through anecdotal evidence and through a literature review of academic studies, the City found that car ownership near a transit stop was 30 percent lower than if it not near a transit stop. This data point helped to inform the City's decision to reduce parking requirements by 30 percent if the project is within one-half mile of a Major Transit Stop. Per the Oakland Planning Code, Major Transit Stop is defined as "…a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two (2) or more major bus routes with a frequency of service interval of fifteen (15) minutes or less during the morning and afternoon peak commute periods."

POLICY RATIONALE

The Task 4.2 Memorandum contains the background rationale for the parking policies. City staff provided additional background on the rationale behind the parking requirement reforms, including:

- Supporting reduced car usage, consistent with the goals of the Equitable Climate Action Plan.
- Lowering the cost of constructing housing. Especially for Affordable Housing, it is difficult to build the required number of parking spaces, especially due to unionized labor requirements.
- With the future potential implementation of automated vehicles, there will be less of a need to build more parking spaces.

THE PARKING POLICY REFORMS HAVE IMPACTED THE AMOUNT OF PARKING BUILT FOR MULTIFAMILY UNITS

City staff indicated that anecdotally, as a result of the parking reductions, developers are building fewer parking spaces. For multi-family housing projects that qualify for the density bonus program, City staff indicated that almost all developers request that parking be reduced or waived.

Further, the majority of the market-rate projects qualify for parking reductions, as the majority of the City is within one-half mile of a Major Transit Stop. Market rate projects that do not qualify for the density bonus program are taking advantage of the parking reductions and building fewer parking spaces.

TDM PROVISIONS ARE INCLUDED AS CONDITIONS OF APPROVAL

The physical TDM elements, including provision of car share spaces and provision of a transit information sign in the development, are reviewed as part of the Building Permit and are included as conditions of approval. Provision of transit pass allowances are also included as conditions of approval.

PARKING MAXIMUMS

The 2016 parking requirement update included implementation of a parking maximum of 1.25 spaces per unit in Transit Oriented Development Zones. City staff indicated that there have not been many projects that have proposed greater than 1.25 parking spaces per unit in TOD zones. Typically, developers do not propose greater than one (1) parking space per unit. Therefore, there has not been significant pushback from the development community regarding the implementation of the parking maximums.

SAN DIEGO

As discussed in the Task 4.2 Memorandum, on March 25, 2019 San Diego approved the elimination of parking requirements for residential dwelling units in areas close to public transit. These areas are designated as Transit Priority Area (TPA), defined as areas within one-half mile of an existing or planned major transit stop, if the planning major transit stop is scheduled to be completed within the planning horizon in the San Diego Association of Government's Regional Transportation Improvement Program (RTIP). Properties that are partially within a TPA qualify for the zero-parking space requirement.

Walker interviewed three different City of San Diego staff from different departments on February 9, February 10, and February 25, 2022, to get an in-depth and comprehensive understanding of San Diego's parking policies. From the discussion, the following key themes were identified:

THE STUDY CONDUCTED HELPED TO INFORM THE RECOMMENDATIONS

As part of the City's study to inform the reduction in parking requirements, a benchmarking analysis was conducted for the cities of Seattle and Portland, both of which reduced or eliminated parking minimums near transit. The commute mode share for these cities showed that overall, vehicle ownership was lower in these cities than in San Diego and vehicle ownership declined over time as a result of the parking policies.

The City's study also included collecting parking occupancy data at residential properties. The City found that on most properties, there was available parking spaces at nighttime, during the period of peak residential parking demand. The observed parking demand, both within and outside of the TPAs, was well below the current parking requirements contained in the City's Municipal Code (prior to the parking reform). This helped the City justify reduced parking requirements.

ALL RESIDENTIAL DEVELOPMENTS WITHIN TPA'S MUST PROVIDE TRANSPORTATION AMENITIES

Residential developments constructed within transit priority areas (TPAs) must provide a certain number of transportation amenities. Amenities are intended to encourage the use of alternative modes of transportation and facilitate non-vehicular access to everyday activities. Areas that are already highly walkable or transit accessible to jobs are required to provide fewer amenities. The program is designed to encourage areas that have fewer naturally occurring amenities to provide transportation alternatives to the use of single occupancy vehicles (SOV). The requirements to provide the amenities are quantified using a points system based on a number of characteristics including:

- Bedroom ratio relative to number of units: developments with smaller unit sizes (fewer bedrooms) have a lower transportation amenity requirement.
- Jobs within a mile (walking): developments that have a larger number of jobs within walking distance have a lower transportation amenity requirement.
- Environmental priority index: the environmental priority is determined using CalEnviroScreen. Developers with a higher environmental priority have a lower transportation amenity requirement.
- Employment within a 30-minute transit trip: developments located within one-half mile of a major transit stop that serves jobs have a lower transportation amenity requirement.

The City has a map-based transportation amenity calculator through which a developer can enter the property address, the number of units proposed and the number of bedrooms proposed.[3] Based on the inputs, the property generates a points value. The higher the points value, the fewer transportation amenities required.

The transportation amenities that a developer selects are included as conditions of approval for the development project. The transportation amenities provided for the purpose of compliance with the conditions of approval must be posted in a common area of the development, and the location must be shown on the building permit drawings. The City lacks the staff resources to verify that amenities are being provided. The City relies on resident complaints in the event that posted amenities are not provided.

Based on anecdotal evidence from City staff, the amenities that are most popular among developers are bike repair stations and Micro Mobility charging stations.

POLICY LETS THE MARKET DICTATE THE AMOUNT OF PARKING PROVIDED

During the stakeholder engagement process in San Diego, one of the major concerns of the community was that every new multi-family residential project was going to be constructed with zero parking. Therefore, the City wanted to communicate to the community that the purpose of the policy was to let the market dictate how many spaces should be provided, rather than maintain a one size fits all requirement.

DEVELOPERS ARE TAKING ADVANTAGE OF REDUCED PARKING REQUIREMENTS

While the parking requirements were being developed, City staff mentioned that anecdotally, the development community was interested in the parking reform. City staff would receive e-mails from the development community asking whether their project would qualify for the reductions.

After the passage of the policy in 2019, although the City did not have quantitative data, City staff indicated that developers are utilizing both the elimination of parking requirements near TPAs and affordable housing program parking reductions. Anecdotally, developers are using the affordable housing incentives through the City's Complete Communities program or through the density bonus program. The Complete Communities program includes an optional affordable housing incentive program aimed at encouraging the building of homes near high-frequency transit. Both the density bonus program and Complete Communities program allow for reduced parking and increased density by building a certain percentage of affordable housing units. The planning press has noted some of the success in San Diego's elimination of parking requirements fueling construction of Affordable Housing units,[4] as is discussed in other sections of our research and analysis.

Anecdotally, City staff have seen projects with ratios of one parking space per unit or less. The policy is especially beneficial for infill development on constrained sites. According to City staff, very few projects have been proposed with zero parking.

ON-STREET PARKING MANAGEMENT

To mitigate potential spillover of parking demand generated by new development into the on-street parking supply, the City is employing parking management strategies specific to each neighborhood. In certain areas, the

[3] Calculator can be found at this link: https://webmaps.sandiego.gov/portal/apps/webappviewer/index.html?id=5a6e1c867e994e6183fe66a2fb63e86a

[4] https://cal.streetsblog.org/2021/05/19/parking-requirements-are-not-a-useful-bargaining-chip-for-increasing-affordable-housing/

City is putting in parking meters to encourage turnover of parking spaces. In some residential neighborhoods specifically, where the widths of streets may allow, the City is evaluating angled parking to maximize on-street parking supply.

CONCLUSION

Based on the Task 4.4 case study analysis, the following key themes emerged:

- Addressing climate and/or housing goals were key reasons cities enacted parking policy reforms.
- Cities cited on-street parking management as an issue in relation to reducing or eliminating parking requirements.
- For two cities (Berkeley and Oakland), having quantitative data helped municipalities to justify parking policy reforms.
- Parking policy reform typically was accompanied by transportation demand management (TDM) policies.
- Limited quantitative data is available demonstrating the impacts of the parking policy reforms in terms of housing production. Anecdotally, cities have indicated developers are taking advantage of the new parking policies.

WALKER CONSULTANTS

MEMORANDUM

TASK 4.6 ECONOMIC ANALYSIS

37-009377.00

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COMPANY:	Department of Regional Planning County of Los Angeles
ADDRESS:	320 W Temple Street
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PROJECT NAME:	LA County Residential Parking Study
PROJECT NUMBER:	37-009377.00

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The following memorandum summarizes the tasks associated with *Task 4.6 Economic Analysis* in the LA County Residential Parking Study. The memorandum provides an overview of the tasks, the Walker team's methodology utilized to complete the tasks, and findings and conclusions. To assist Walker with the economic analysis, Walker engaged Bay Area Economics ("BAE"), an award-winning urban economics and public-benefit real estate development consulting practice founded in 1986.

OVERVIEW

The purpose of Task 4.6 is to determine and quantify how potential changes to parking design requirements and the number of parking spaces provided for multi-family housing may translate into potential increases in the production of housing within the study areas and/or potential increases in affordability of the housing that is developed in the study areas.

The goals of the analysis are to determine:

- The impact of existing minimum parking requirements on potentially restricting or inhibiting the development of housing units. This may be due to parcel size constraints that impede functional parking layouts and/or the inability to fulfill the total code-required number of parking spaces, therefore leaving the site vacant or underdeveloped.
- The number of additional housing units that could be constructed as a result of reducing or eliminating the minimum number of required parking spaces.
- The cost savings associated with building fewer parking spaces and how these cost savings could reasonably translate into the construction of additional units or more affordable units.

The economic analysis considers the building envelope of each site and the density permitted under the zoning code compared to various parking provision scenarios to determine the potential for developing market-rate and Affordable housing units based on assumed land costs, rental rates, building construction costs, and parking construction costs.

METHODOLOGY

The Walker team's analysis encompassed the following specific tasks.

- **Site selection:** Identification of representative sites in unincorporated County areas
- **Scenario development**: Creation of housing and parking scenarios to analyze and assess the potential for additional housing production and/or improved housing affordability. Scenarios were analyzed based on the following factors:
    - Typical sites in the County that were identified during the site selection task

  - Hypothetical development scenarios that incorporated market conditions
  - A range of parking supply provision assumptions
- **Parking design**: Potential adjustments to current County parking design guidelines that would improve the feasibility of housing development on the typical sites and creation of illustrative parking supply concepts for the sites

These tasks culminated in an analysis of potential impacts on housing production and affordability under different site size, housing product type, and parking scenarios.

SITE SELECTION PROCESS

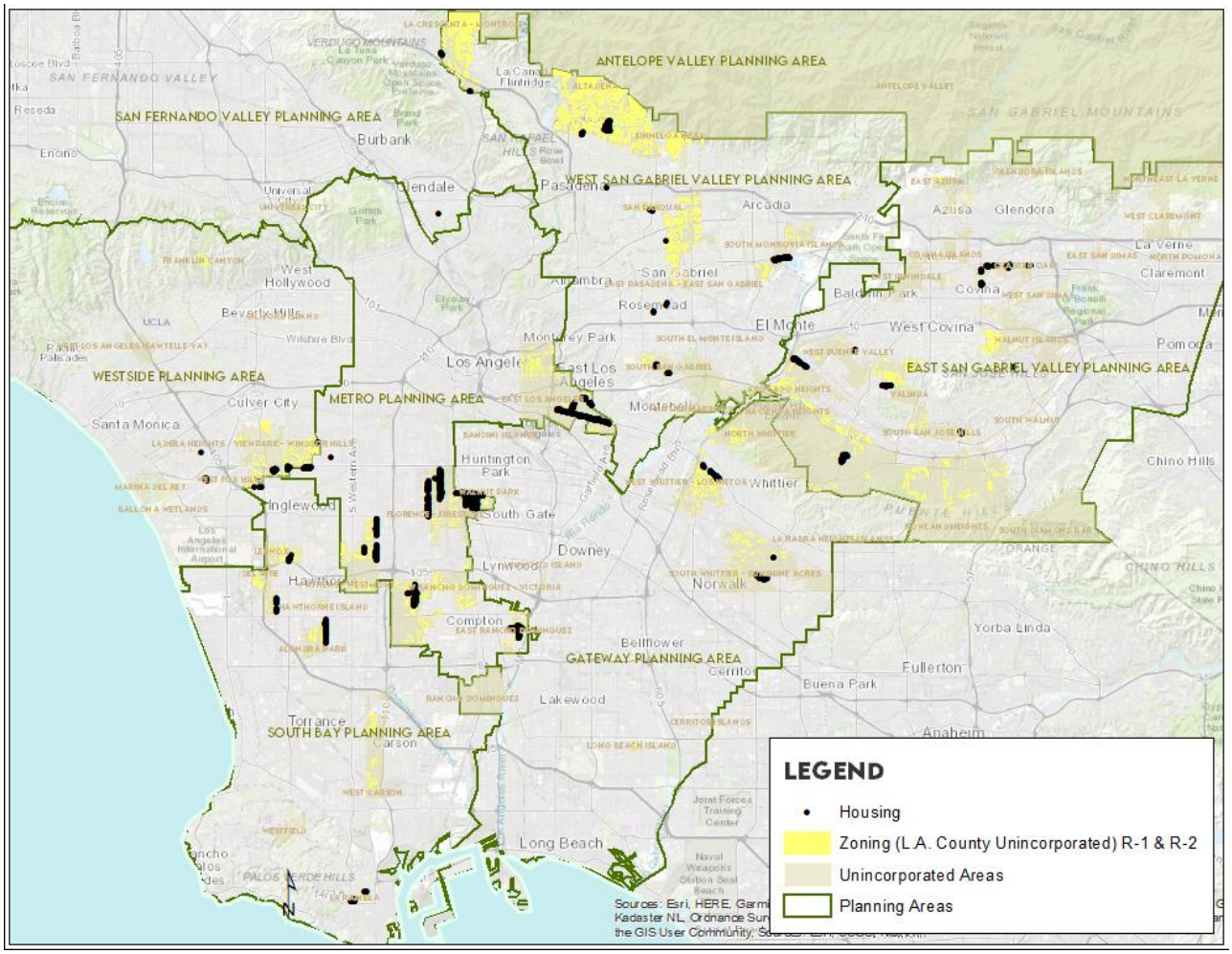
To bring a tangible element to the economic analysis, in which we look at the actual types, dimensions, and zoning of parcels from which developers of housing in the County typically must select, Walker identified vacant parcels in various communities across the County as case studies for the economic analysis. Walker selected ten sites to determine and quantify how changes to the County's parking design requirements and number of the parking spaces required for multi-family housing may translate into potentially increased housing production and/or housing affordability. To determine these sites, Walker conducted a multi-step process.

Step 1: High-Level Site Selection Criteria
The first step in determining sites for evaluation was to identify high-level site selection criteria. The criteria identified include:

- **Occupancy**: Whether the property is vacant or underutilized.
- **Zoning:** The property zoning permitted under Title 22 of the Los Angeles County Code.
- **Zoning Proximity:** The proximity to Zones R-1 and R-2, which are low-density residential zones. Later in the document we explain why the proximity to R-1 and R-2 zones is important for the analysis.
- **Transit Proximity:** The proximity to transit, which may impact both parking requirements and parking needs.
- **Parking Reduction:** Whether the site qualifies for reductions in the number of required parking spaces when based on the number of bicycle parking spaces provided.
- **Area:** What LA County Planning Area is the property located:
  - Santa Clarita Valley
  - Westside
  - Metro
  - West San Gabriel Valley
  - East San Gabriel Valley
  - South Bay
  - Gateway

Step 2: Site Selection Review: Multi-Family Zoning
Walker first reviewed the County's 111 public and privately held vacant parcels listed in LA County's Housing Element Appendix Table B to identify those parcels located in unincorporated areas zoned for multi-family residential use and suitable for evaluation. In total 93 vacant parcels were considered for review as shown in Figure 1 on page 3.

Figure 1: Los Angeles County Vacant Parcels Located in Areas Zoned for Multi-Family Housing Identified for Further Review



Source: LA County, Walker Consultants, 2022

Step 3: Defined Site Selection Criteria Metrics

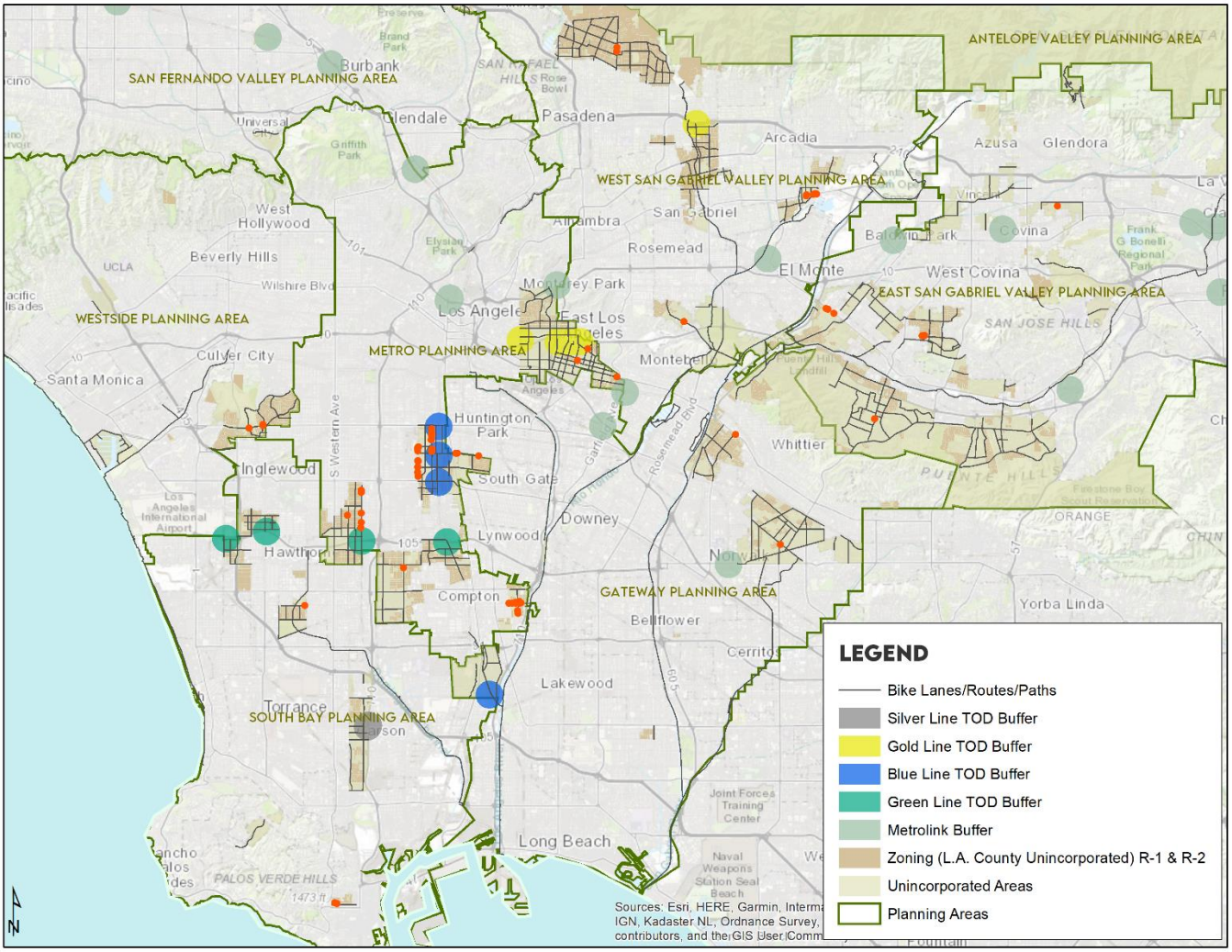
Walker then defined site selection criteria metrics for each of the high-level criteria and further refined the site selection based on the following:

- **Vacant or Underutilized Property:** Is the property vacant and available for development
- **Zoning:** What is the allowable Floor Area Ratio (FAR) under Title 22. The goal is to choose sites that permit higher FARs and have more development potential. The zoning designations included MXD, C-2, C-3, and R-4.
- **Zoning Proximity:** Is the site located adjacent to Zone R-1 and R-2, which are low-density residential zones and require larger setbacks on adjacent parcels. If the property is located within 1/16 of a mile in proximity to these zones, it was eliminated.
- **Transit Proximity:** Is the site located near high-capacity transit (i.e., Bus Rapid Transit stations, Metro Rail stations). This includes vacant parcels within a transit-oriented development area and within a half-mile of a Metrolink station.

- **Parking Reduction:** Is the site located 1/16 of a mile from an area eligible for a reduction in parking requirements when providing bicycle parking. The County allows for a parking reduction if a project is located
    a) On or adjoining a lot or lots containing an existing or proposed bicycle path, lane, route, or boulevard, as so designated in the County Bicycle Master Plan; and
    b) Within one-half mile of a transit stop for a fixed rail or bus rapid transit or local bus system along a major or secondary highway.

A review of the 93 vacant parcels identified as zoned for multi-family residential were mapped according to these defined site selection criteria metrics. In total, Walker identified 77 sites for additional review based on the criteria metrics as shown in Figure 2.

Figure 2: Los Angeles County Vacant Parcels Identified for Additional Review Based on Defined Criteria Metrics

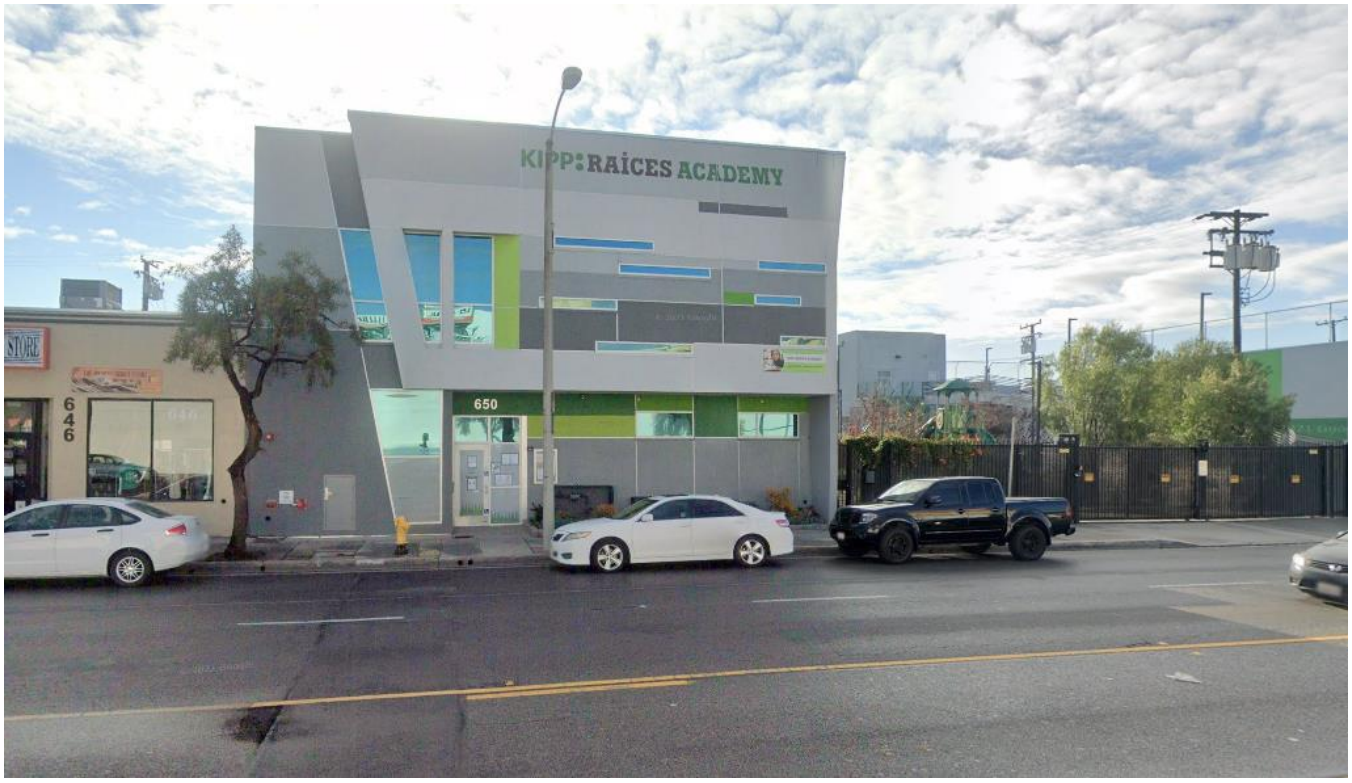


Source: LA County, Walker Consultants, 2022.

Step 4: Site Analysis
Walker then reviewed satellite images for the 77 sites to identify ten parcels suitable for economic evaluation. The goal was to identify a mix of parcel sizes, configurations, and locations. This review included confirmation that the properties were actually vacant, not adjacent to an area zoned for R-1 or R-2, proximity to walkable amenities (such as a grocery store, schools, and jobs), and proximity to transit (such as on a bus or Metro Rail stations).

A review of satellite images found that of the 77 sites, 29 were either not vacant or duplicates of one of the other 77 addresses. For example, 650 S. Atlantic Avenue is listed in the County's database as vacant, but the satellite image review shows that it is developed as shown in Figure 3.

Figure 3: 650 South Atlantic Avenue



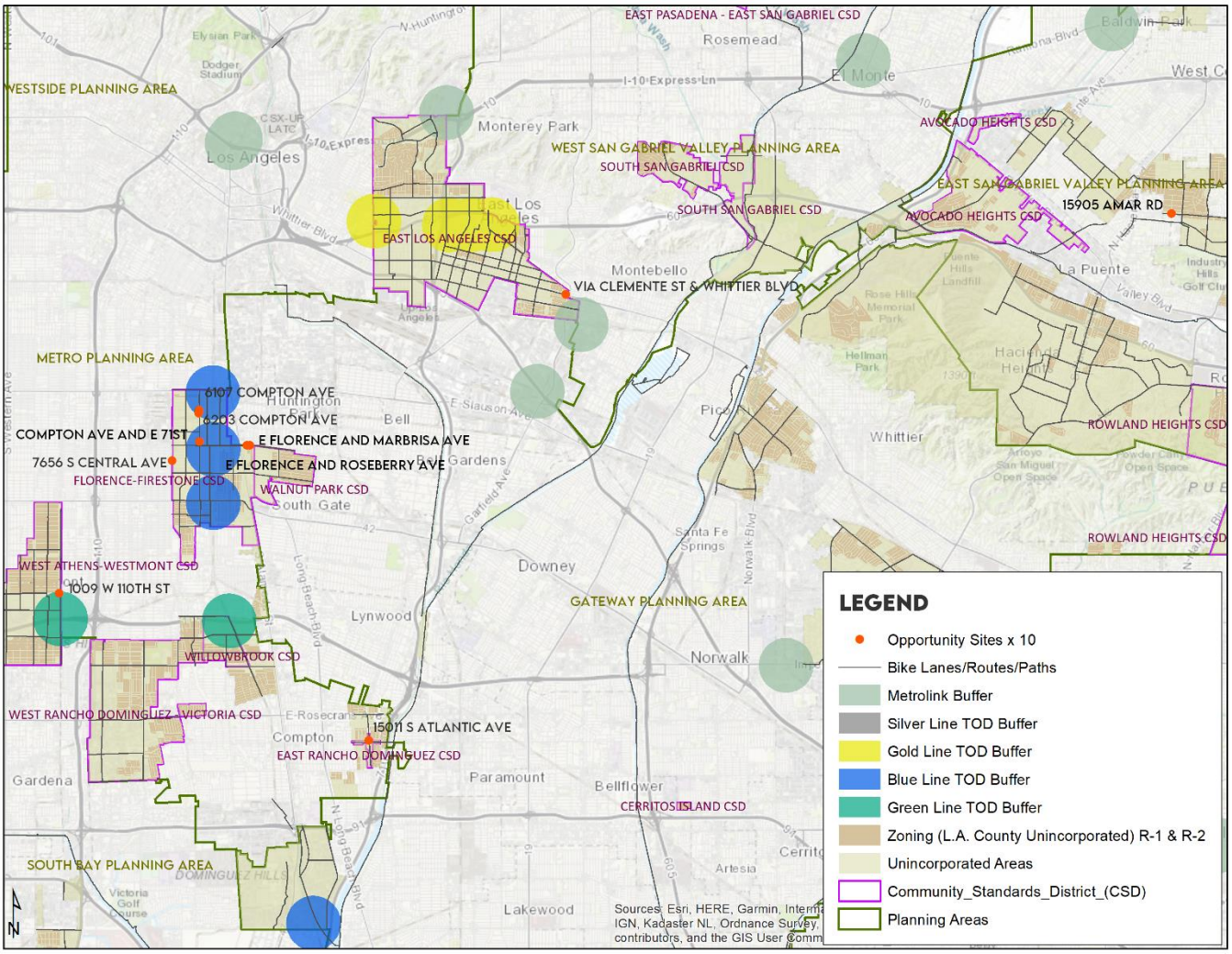
Source: Google Image Capture March 2021.

Based on this site analysis, ten sites were identified as case studies for economic evaluation. The ten sites are shown in the map and images in Figure 4 on page 6.

- **6203 Compton Avenue:** Smaller parcel with new multi-family development across the street
- **7656 and 7662 South Central Avenue:** Smaller parcel, on The Link – Florence Firestone route, walkable retail including a grocery store
- **East Florence Avenue and Roseberry Avenue:** Larger parcel with walkable retail amenities
- **6107 Compton Avenue:** Smaller parcel that provides an example of a challenging development, walkable to retail including a grocery store
- **Compton Avenue and East 71st Street:** Smaller parcel near several Metro transit lines

- **1009 West 110Th Street:** Smaller parcel near several Metro transit lines and walkable to retail including a grocery store
- **East Florence Avenue and Marbrisa Avenue:** Larger parcel near several Metro transit lines and walkable to retail including a grocery store
- **6554 Whittier Boulevard at Via Clemente:** Larger parcel near several Metro transit lines and walkable to retail including a grocery store and department store
- **15011 South Atlantic Avenue:** Larger parcel walkable to retail including a grocery store
- **15905 Amar Road:** Smaller parcel that provides an example of a challenging development, walkable to retail

Figure 4: Sites Identified for Economic Evaluation



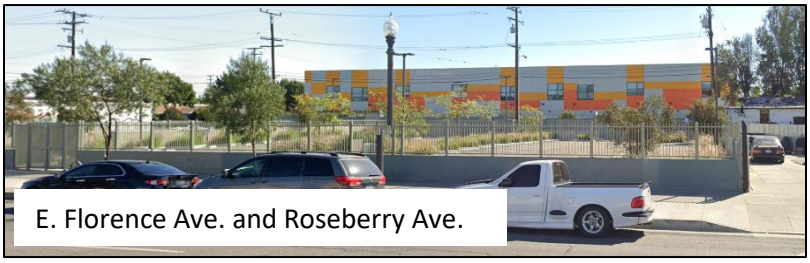
Source: LA County, Walker Consultants, 2022.

6203 Compton Ave.

15905 Amar Rd.

7656 S. Central Ave.

15011 Atlantic Ave.

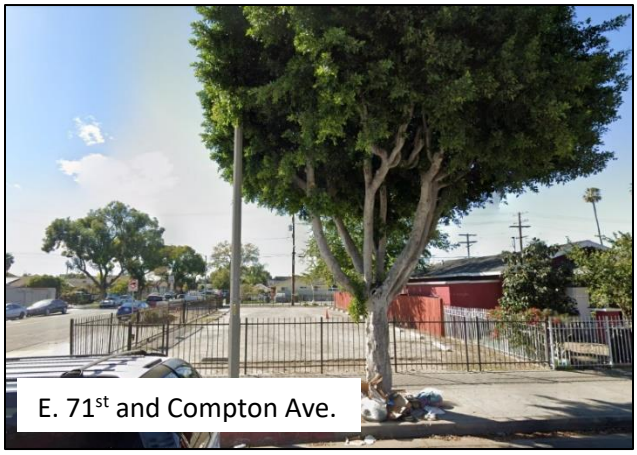


E. Florence Ave. and Roseberry Ave.

1009 W. 110th St.

6107 Compton Ave.

6554 Whittier Blvd. at Via Clemente



E. 71st and Compton Ave.

E. Florence Ave. & Marbrisa Ave.

Step 5: Typical Representative Sites
Based on this process, two typical site types were selected that are representative of the ten sites. The first site is 45 feet by 120 feet, totaling 5,400 square feet, and the other 85 feet by 170 feet, totaling 14,450 square feet. Each site is assumed to be located mid-block with alley access available.

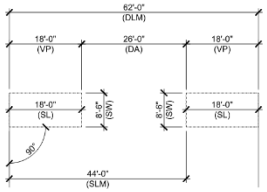
PARKING DESIGN CONCEPT EVALUATION

Three parking design concepts were developed for each site. Specific details of these concepts follow.

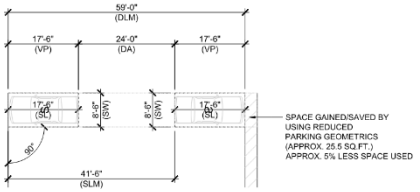
- These concepts all assumed a self-park configuration, which Walker strongly recommends. Walker only recommends automated/mechanical solutions to assist with moving parked vehicles if a site's geometry does not support a self-park design. Mechanical and some automated solutions may also be challenging for some residents to operate themselves.
- For each concept, layouts were developed using current County code parking standards as well as Walker recommended parking design standards (shown in Figure 5 on page 9).
- Note that applying Walker standards to these concept designs in some cases were more efficient, but due to the parcel sizes observed, did not increase the parking space count, for the most part. However, they do allow for more space to support aspects that are refined through the development process, such as vertical circulation, structural support, ADA-accessible parking spaces, and EV charging spaces. Utilizing the Walker standards can also create more space that may be dedicated to building amenities.
- For the small 45-foot by 120-foot site, all three parking design concepts only support a single level of parking, assumed to be at ground level. For the large 85-foot by 170-foot site, two parking design concepts only support a single level of parking, assumed to be at ground level, while one parking design concept supports multiple levels, which we've assumed as a ground level and second level above.

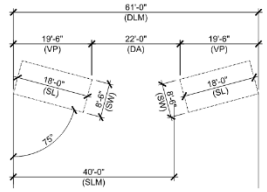
Figure 6 on page 10 details the three 45-foot by 120-foot site parking design concepts, using Walker parking design standards, which yield an estimated 16, 10, and 11 parking spaces from left to right and denoted as A, B, and C. Concept A would be a mix of nine standard and seven compact stalls, while concepts B and C would have all standard stalls. Note, that the estimated space counts indicated for concepts A, B, and C assume the removal of some parking to accommodate a small lobby and elevators/stairs for vertical circulation, denoted by the red blocked out areas.

Figure 5: Walker's Recommended Parking Design Standards

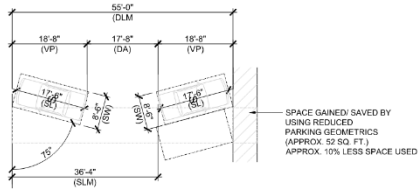


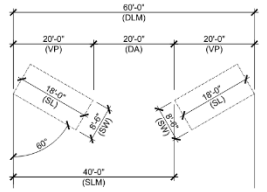
PARKING GEOMETRICS - COMPARISON 8'-6" 90° STANDARD SPACE			
	LA COUNTY	WALKER LOS 2020 (US TABLES)	LOS 85TH PERCENTILE DESIGN VEHICLE (6'-7" x 16'-10")
STALL WIDTH (SW)	8'-6" MIN.	8'-6" MIN.	C
STALL LENGTH (SL)	18'-0" MIN.	17'-6" MIN.	
PARKING ANGLE	90	90	
VEHICLE PROJECTION (VP)	18'-0" MIN.	17'-6" MIN.	
DRIVE AISLE WIDTH (DA)	26'-0" MIN.	24'-0" MIN.	C
SINGLE LOADED BAY MODULE (SLM)	44'-0" MIN.	41'-6" MIN.	C
DOUBLE LOADED BAY MODULE (DLM)	62'-0" MIN.	59'-0" MIN.	C



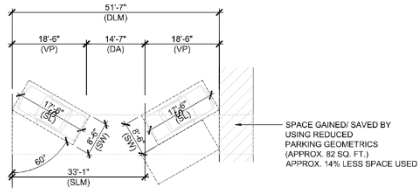


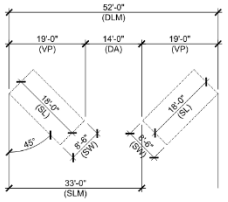
PARKING GEOMETRICS - COMPARISON 8'-6" 75° STANDARD SPACE			
	LA COUNTY	WALKER LOS 2020 (US TABLES)	LOS 85TH PERCENTILE DESIGN VEHICLE (6'-7" x 16'-10")
STALL WIDTH (SW)	8'-6" MIN.	8'-6" MIN.	C
STALL LENGTH (SL)	18'-0" MIN.	17'-6" MIN.	
PARKING ANGLE	75	75	
VEHICLE PROJECTION (VP)	.	18'-8" MIN.	
DRIVE AISLE WIDTH (DA)	.	17'-8" MIN.	C
SINGLE LOADED BAY MODULE (SLM)	.	36'-4" MIN.	C
DOUBLE LOADED BAY MODULE (DLM)	.	55'-0" MIN.	C



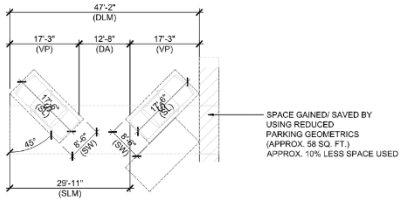


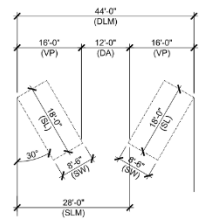
PARKING GEOMETRICS - COMPARISON 8'-6" 60° STANDARD SPACE			
	LA COUNTY	WALKER LOS 2020 (US TABLES)	LOS 85TH PERCENTILE DESIGN VEHICLE (6'-7" x 16'-10")
STALL WIDTH (SW)	8'-6" MIN.	8'-6" MIN.	C
STALL LENGTH (SL)	18'-0" MIN.	17'-6" MIN.	
PARKING ANGLE	60	60	
VEHICLE PROJECTION (VP)	20'-0" MIN.	18'-6" MIN.	
DRIVE AISLE WIDTH (DA)	20'-0" MIN.	14'-7" MIN.	C
SINGLE LOADED BAY MODULE (SLM)	40'-0" MIN.	33'-1" MIN.	C
DOUBLE LOADED BAY MODULE (DLM)	60'-0" MIN.	51'-7" MIN.	C



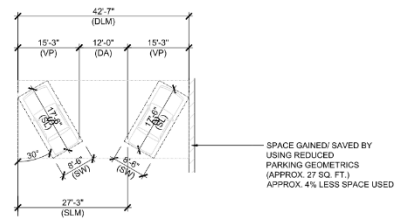


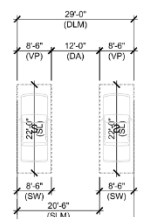
PARKING GEOMETRICS - COMPARISON 8'-6" 45° STANDARD SPACE			
	LA COUNTY	WALKER LOS 2020 (US TABLES)	LOS 85TH PERCENTILE DESIGN VEHICLE (6'-7" x 16'-10")
STALL WIDTH (SW)	8'-6" MIN.	8'-6" MIN.	C
STALL LENGTH (SL)	18'-0" MIN.	17'-6" MIN.	
PARKING ANGLE	45	45	
VEHICLE PROJECTION (VP)	19'-0" MIN.	17'-3" MIN.	
DRIVE AISLE WIDTH (DA)	14'-0" MIN.	12'-8" MIN.	C
SINGLE LOADED BAY MODULE (SLM)	33'-0" MIN.	33'-1" MIN.	C
DOUBLE LOADED BAY MODULE (DLM)	52'-0" MIN.	47'-2" MIN.	C



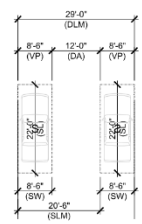


PARKING GEOMETRICS - COMPARISON 8'-6" 30° STANDARD SPACE			
	LA COUNTY	WALKER LOS 2020 (US TABLES)	LOS 85TH PERCENTILE DESIGN VEHICLE (6'-7" x 16'-10")
STALL WIDTH (SW)	8'-6" MIN.	8'-6" MIN.	C
STALL LENGTH (SL)	18'-0" MIN.	17'-6" MIN.	
PARKING ANGLE	30	30	
VEHICLE PROJECTION (VP)	16'-0" MIN.		
DRIVE AISLE WIDTH (DA)	12'-0" MIN.		C
SINGLE LOADED BAY MODULE (SLM)	28'-0" MIN.		C
DOUBLE LOADED BAY MODULE (DLM)	44'-0" MIN.		C



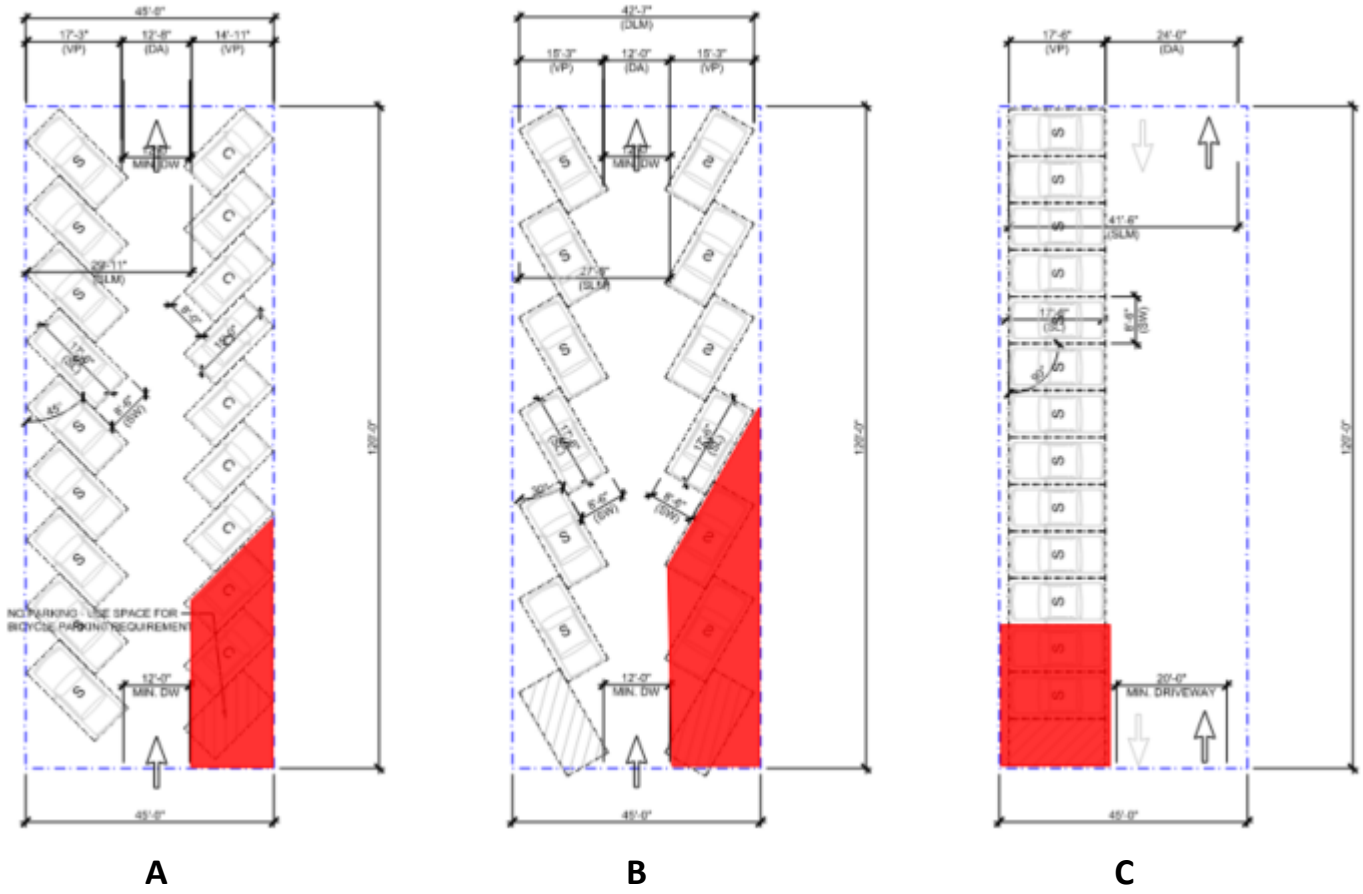


PARKING GEOMETRICS - COMPARISON 8'-6" 0° STANDARD SPACE			
	LA COUNTY	WALKER LOS 2020 (US TABLES)	LOS 85TH PERCENTILE DESIGN VEHICLE (6'-7" x 16'-10")
STALL WIDTH (SW)	8'-6" MIN.	8'-6" MIN.	C
STALL LENGTH (SL)	18'-0" MIN.	22'-0" MIN.	
PARKING ANGLE	0	0	
VEHICLE PROJECTION (VP)	8'-6" MIN.	8'-6" MIN.	
DRIVE AISLE WIDTH (DA)	.	12'-0" MIN.	C
SINGLE LOADED BAY MODULE (SLM)	.	20'-6" MIN.	C
DOUBLE LOADED BAY MODULE (DLM)	.	29'-0" MIN.	C



Source: Walker Consultants, 2022.

Figure 6: 45-foot by 120-foot Site Parking Design Concepts (with Walker Parking Design Standards)



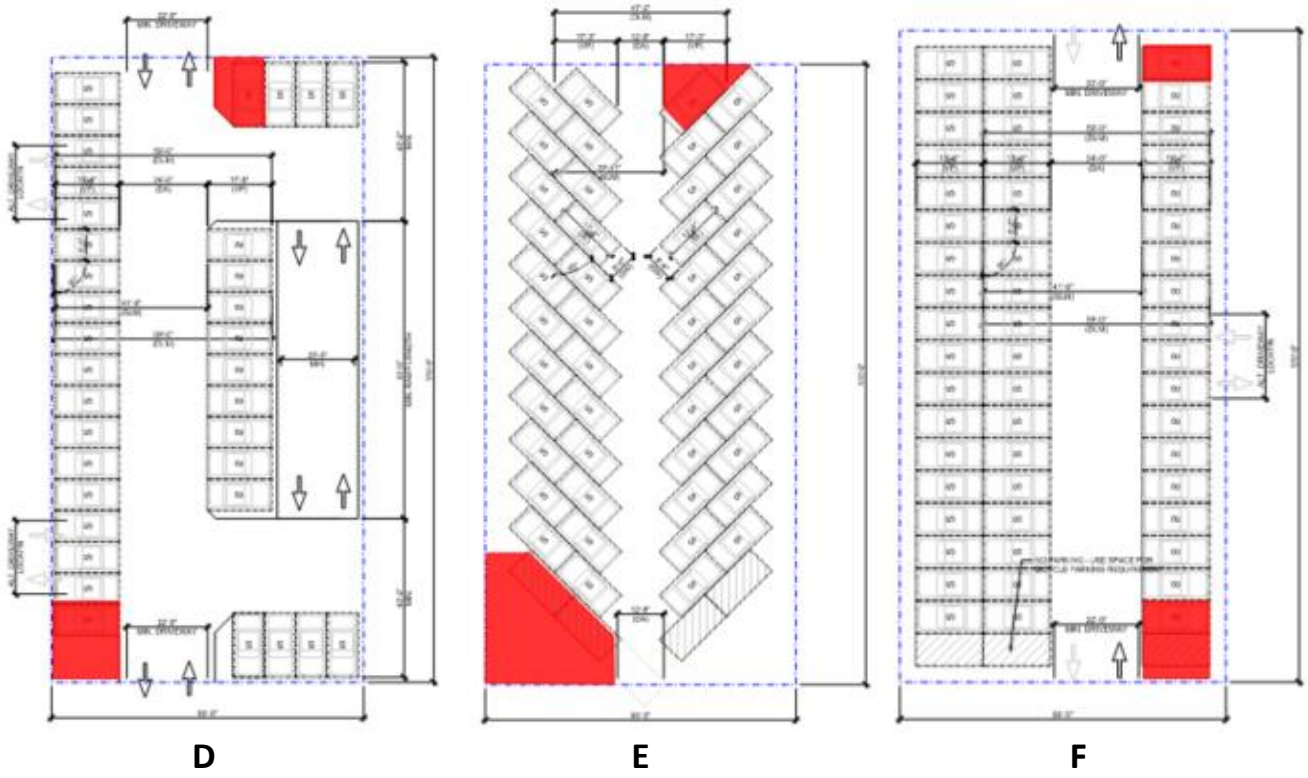
Source: Walker Consultants, 2022.

Figure 7 on page 11 details the 85-foot by 170-foot site parking design concepts, using Walker parking design standards, which yield an estimated 58, 45, and 52 parking spaces from left to right and denoted as D, E, and F.

- Concept D would support an estimated 33 standard spaces on ground level and 35 standard spaces on additional levels, either above or below.
- Concepts E and F both support only a single level of parking at ground level and have tandem spaces, limiting the flexibility in how spaces are allocated to residential units, or require a parking attendant to move vehicles. Concept E is estimated to serve up to 25 units without a parking attendant, while concept F is estimated to serve up to 34 units without a parking attendant.

Note, that the estimated space counts indicated for concepts D, E, and F assume the removal of some parking to accommodate a small lobby and elevators/stairs for vertical circulation, but given the conceptual nature of these designs, potential structural and ADA requirements were not specifically accounted for in this analysis.

Figure 7: 85-foot by 170-foot Site Parking Design Concepts (with Walker Parking Design Standards)



Source: Walker Consultants, 2022.

SCENARIOS ANALYZED

The Walker team's effort focused on analyzing the potential impacts on housing production and housing affordability for conceptual 100% market-rate and 100% Affordable housing developments on each of the two typical sites defined in the site selection process. Note the following regarding 80/20 market-rate/Affordable and senior housing.

- An 80/20 market-rate/Affordable mix ("80/20 mix") was not included as given the time and complexity associated with obtaining the bond financing for a project with an 80/20 mix, real estate developers only believe it is worthwhile to pursue an 80/20 mix for much larger projects, generally in the hundreds of units. Given the small site sizes identified in the site selection process, which are typical to vacant parcels in the County, the scale of projects on these sites is too small for developers to justify the effort required to obtain bond financing for an 80/20 mix.
- Senior housing was not specifically analyzed because the Walker team felt the most important consideration for housing targeted at an older market is the reduced parking need, which would be addressed in the 100% market-rate and 100% Affordable scenarios. In addition, senior housing is not a common housing type to develop, especially when considering the multiple sub-categories under senior housing such as assisted living, active adult, and Affordable.

Specific development, parking ratio, and program assumptions are detailed in the remainder of the section.

DEVELOPMENT ASSUMPTIONS

The housing developments modeled in the analysis followed County Mixed Use Development Zone (MXD) standards (code section 22.26.030) as the two sites are assumed to fall under MXD zoning (the sites are either zoned MXD currently or are slated to be zoned MXD per the Housing Element). The key assumptions utilized follow:

- No side or rear setback applied as property would not be immediately abutting an R-1 or R-2 property
- Height limit of 65 feet
- Maximum floor area ratio of 3.0, with parking areas not being considered floor area
- Minimum 10% of private or common recreational space within development
- Site needs like sidewalk and any required easement space in front along with garbage service considerations can be accommodated
- Housing units would be of wood frame construction on top of a concrete parking podium

PARKING RATIO ASSUMPTIONS

The Walker team developed a range of different assumptions about parking to be provided at market-rate and Affordable developments in the development scenarios. The intent was to model existing County code as well as reductions to the existing code. Note that the team did not explicitly incorporate the maximum 5% reduction allowed within the current code for bicycle parking as the reduction is minimal for the typical sites in this analysis and would not have an impact on the number of parking levels required. However, reductions for bicycle parking may be implied in some of the scenario assumptions. These parking ratio scenario assumptions are detailed below.

100% MARKET-RATE SCENARIOS

- **None** – no parking provided for any units
- **Low** – one (1.0) space per unit, regardless of unit type
- **Medium** – current County code (table 22.112.060-A) with reductions allowed in MXD
    - Studio: 1.125 per unit (1.5 with 25% reduction allowed in MXD)
    - 1-bed: 1.125 per unit (1.5 with 25% reduction allowed in MXD)
    - 2-bed or larger: 1.5 per unit (2.0 with 25% reduction allowed in MXD)
    - Visitor: 0.25 per unit (no reduction for MXD)
- **High** – current County code (table 22.112.060-A)
    - Studio: 1.5 per unit
    - 1-bed: 1.5 per unit
    - 2-bed or larger: 2.0 per unit
    - Visitor: 0.25 per unit

100% AFFORDABLE SCENARIOS

- **None** – no parking provided for any units
- **0.5 per unit** – 0.5 spaces per unit, consistent with Density Bonus assumptions

PROGRAM ASSUMPTIONS

The Walker team then developed a unit mix for each typical site (45-foot by 120-foot and 85-foot by 170-foot) – unit count by unit type and unit sizes for both the 100% market-rate and the 100% Affordable scenarios.

100% MARKET-RATE PROGRAM MIX

For the market-rate program mix, the team utilized available online data regarding apartment unit sizes and Census housing data to inform unit mix. As the smaller site was based on sites found largely in the Florence/Firestone area, the team utilized data from both unincorporated County and incorporated areas of South Los Angeles. The larger site was based on sites in unincorporated areas east of downtown Los Angeles and the team researched data from the San Gabriel Valley to inform the program on this site. The base market-rate program on each site maximized the building envelope available on each site as detailed in Table 1. Note that the average gross square feet per unit reflects a gross up of 20% applied to actual unit sizes to account for private or common recreational space as well as other common areas.

Table 1: Base Market-Rate Program for Each Site

	45' x 120' site			85' x 170' site		
Unit Counts/Sizes	**Number**	**Avg. Gross SF**	**Mix**	**Number**	**Avg. Gross SF**	**Mix**
Studios	2	540	13%	0	N/A	0%
1-Bedrooms	3	840	19%	8	900	22%
2-Bedrooms	11	1,140	69%	18	1,200	50%
3-Bedrooms	0	N/A	0%	10	1,440	28%
Total/Average	**16**	**1,009**	**100%**	**36**	**1,200**	**100%**

Source: Walker Consultants, 2022.

Adjustments were made to base market-rate programs based on the parking need for each parking ratio assumption (None, Low, Medium, and High) and the feasibility of providing the parking. These specific adjustments include the following:

- For the 45-foot by 120-foot site, the number of residential units was reduced for Medium and High parking ratio scenarios from 16 to ten and seven units, respectively, in order to support a project that only requires one level of parking because a second level is not feasible on this site. Parking concept A, with an estimated 16 spaces, was assumed.
- For the 85-foot by 170-foot site, the number of residential units was reduced by three units, from 36 to 33 units, for the Low parking ratio scenario to avoid building a second level of parking with only a small number of spaces.
    - Our interviews with market-rate developers clearly conveyed the reality that they will construct the number of parking levels needed to achieve financial feasibility. Therefore, this means constructing full levels of parking only if all parking spaces can support additional residential units. In this case, the floor area ratio limits the number of units to 36 so a developer would choose to provide just one level of parking, which would mean reducing the unit count based on the number of parking spaces on a single level of parking (i.e. 1.0 space per unit and 33 spaces total on the ground level of parking supports 33 residential units).
    - Similarly for the High parking ratio scenario, the number of residential units was reduced to 32 as any more units would require a third level of parking, which is not feasible. Parking concept D, with an estimated 58 spaces (33 spaces on the ground level and 35 spaces on a second level above ground level), was assumed.

PROGRAM ASSUMPTIONS: **AFFORDABLE**

The Walker team applied the same program assumptions used for the base market-rate program on each site to the Affordable program on each site, but scaled up the number of units by applying the density bonus to the extent possible. The team believes this is a reasonable assumption given the smaller unit sizes selected, which are suitable for both market-rate and Affordable housing resident needs. The initial goal was to increase the density bonus to 80%, in order to take full advantage of the program. However, doing so would push the construction type of Affordable housing into more costly steel/concrete construction type. Therefore, the density bonus was set to 68%, which maximized the number of Affordable units that could be built using wood frame construction. Note that a feasible parking configuration, where parking would only be on one level, was within the 68% density bonus assumption under the 0.5 per unit parking ratio scenario (i.e. parking did not factor into the density bonus adjustment).

The following tables detail the unit mix, total parking spaces, floors of residential structure, and floors of parking for the different parking ratio scenarios for 100% market-rate and 100% Affordable housing on each site.

Table 2: 45-foot by 120-foot Site Scenario Details

	100% Market-Rate				100% Affordable	
Unit Counts	**None**	**Low**	**Medium**	**High**	**None**	**0.5/Unit**
Studios	2	2	1	0	3	3
1-Bedrooms	3	3	2	1	5	5
2-Bedrooms	11	11	7	6	18	18
3-Bedrooms	0	0	0	0	0	0
Total Units	**16**	**16**	**10**	**7**	**26**	**26**
Total Parking Spaces	**0**	**16**	**16**	**15**	**0**	**13**
Floors of Residential	**4**	**4**	**4**	**4**	**5**	**5**
Floors of Parking	**0**	**1**	**1**	**1**	**0**	**1**

Source: Walker Consultants, 2022.

Table 3: 85-foot by 170-foot Site Scenario Details

	100% Market-Rate				100% Affordable	
Unit Counts	**None**	**Low**	**Medium**	**High**	**None**	**0.5/Unit**
Studios	0	0	0	0	0	0
1-Bedrooms	8	7	8	8	13	13
2-Bedrooms	18	17	18	16	30	30
3-Bedrooms	10	9	10	8	17	17
Total Units	**36**	**33**	**36**	**32**	**60**	**60**
Total Parking Spaces	**0**	**33**	**60**	**68**	**0**	**30**
Floors of Residential	**4**	**4**	**4**	**4**	**5**	**5**
Floors of Parking	**0**	**1**	**2**	**2**	**0**	**1**

Source: Walker Consultants, 2022.

ECONOMIC ANALYSIS FINDINGS

BAE incorporated the scenario assumptions into a financial feasibility analysis, which evaluated hypothetical multifamily rental prototypes on the two typical sites to test how changes in parking requirements on each site could affect the feasibility of developing market-rate and Affordable projects.

- Site 1, the 45-foot by 120-foot site, ("Florence-Firestone site") was assumed to be located in the Florence-Firestone area and measures 5,400 square feet.
- Site 2, the 85-foot by 170-foot site, ("Valinda area site") was assumed to be located slightly east of the City of La Puente in unincorporated Los Angeles County and measures 14,450 square feet.

The methodology used for this analysis involved preparation of static pro-forma financial feasibility models for six multifamily rental prototypes on each site. The static pro-forma models represent a form of financial feasibility analysis that developers often use at a conceptual level of planning for a development project, as an initial test of financial feasibility for a development concept to screen for viability. BAE developed the various modeling inputs and assumptions needed for the financial feasibility analysis based on data from industry publications and databases, experience with recent development projects in the local area, and other research.

For each site, the analysis tested the following residential development prototypes outlined on Table 2 and Table 3 on page 14:

- Market-rate rental with no parking provided
- Market-rate rental with a low parking requirement (1.0 space per unit)
- Market-rate rental with a medium parking requirement (1.6 to 1.7 spaces per unit)
- Market-rate rental with a high parking requirement (2.1 spaces per unit)
- Affordable rental with no parking provided (assuming 4% tax credit financing)
- Affordable rental with 0.5 parking spaces per unit (assuming 4% tax credit financing)

The analysis assumed a mix of studios, one-bedroom units, and two-bedroom units on the Florence-Firestone site and a mix of one-bedroom units, and two-bedroom units, and three-bedroom units on the Valinda area site.

MARKET-RATE RESIDENTIAL DEVELOPMENT FINDINGS

Market-rate development faces financial feasibility challenges in both the Florence-Firestone and Valinda areas. The financial feasibility analysis found that the market-rate prototypes were not financially feasible on either site, regardless of the parking requirements. These feasibility challenges are attributable to the low market-rate rents in the area coupled with the high cost of construction.

Lower parking ratios significantly improve the financial feasibility of market-rate development on both sites. To test the impact that reduced parking ratios would have on the financial feasibility of market-rate development, BAE adjusted the rent assumptions to determine the rents necessary to achieve financial feasibility in the market-rate no-parking scenario on each site. BAE then adjusted the rents to determine the extent to which market-rate rents would need to increase to achieve feasibility in the prototypes with higher parking ratios.

- For the prototype on the Florence-Firestone site to achieve financial feasibility, market-rate rents would need to be approximately 7% higher in the low-parking scenario, 13% higher in the medium-parking scenario, and 18% higher in the high-parking scenario, compared to the rent needed to achieve financial feasibility in the no-parking scenario.

- For the prototype on the Valinda area site to achieve financial feasibility, market-rate rents would need to be approximately 7% higher in the low-parking scenario, 11% higher in the medium-parking scenario, and 15% higher in the high-parking scenario, compared to the rent needed to achieve financial feasibility in the no-parking scenario.

Reduced parking ratios improve feasibility in part by reducing total per-unit development costs. Table 4 shows the total per-unit development costs for the prototypes projects on each site in each parking scenario. As shown, the total per-unit construction cost increases as the parking ratios increase on each site.

Table 4: Total Development Costs per Unit, Excluding Land

	Parking Scenario			
	None	Low	Medium	High
Florence-Firestone Site	$ 384,490	$ 424,151	$ 454,639	$ 483,818
La Puente Area Site	$ 450,628	$ 491,494	$ 516,728	$ 536,564

Source: BAE, 2022.

Reduced parking ratios also improve feasibility by allowing more units on parking-constrained sites, which can be particularly important for achieving financial feasibility on small sites. The number of units that each site can accommodate is somewhat constrained by the number of parking spaces that will fit on the site.

- The financial feasibility analysis assumed that the Florence-Firestone site could accommodate a maximum of 16 parking spaces in one level of podium parking, due to the small size of the site. To maintain the designated parking ratios, the number of units that the site could accommodate decreased as the parking ratios increased, from 16 units in the no-parking and low-parking scenarios to ten units in the medium-parking scenario and seven units in the high-parking scenario.
- Because the Valinda area site is slightly larger, the analysis assumed up to two levels of podium parking, enabling slightly more flexibility. However, the high-parking scenario on that site is somewhat constrained by the ability to provide the number of parking spaces necessary to serve the number of units on site. As a result, many of the fixed costs associated with developing each site, such as site acquisition and site preparation costs, are spread across fewer units, increasing the per-unit development cost as the parking ratios increase.

Reduced parking ratios may enable the construction of market-rate units in the Florence-Firestone and Valinda areas at a lower price point than would be possible with higher parking ratios. As discussed above, the rent necessary to achieve financial feasibility increases as the parking ratios increase. This means that a smaller increase in market-rate rents is necessary to achieve financial feasibility in the Low scenario, and more significant increases in market-rate rents are necessary to achieve financial feasibility as the parking ratios increase, with the highest rent increases required in the High scenario.

Note that market-rate developers set rents based on what the market will bear, and the feasibility of a project depends on whether market rents in an area are high enough to incentivize a developer to pursue a project there, given development costs. If there are excess profits, there is usually one of two outcomes, or a combination of the two:

1. The developer pockets the excess profit, or

2. Developers compete for development sites, driving up the cost of land, and the excess profit essentially accrues to the person selling the land.

Parking reductions can reduce the cost to construct projects, and that may result in lower rents being charged to make a project feasible, but a developer is not going to reduce rents on a property because it costs less to build if the market will support a higher rental rate. In other words, parking reductions can affect a developer's decision to build a project that would have lower rents, which could lead to the production of more affordable housing because rents do not have to be as high to encourage a developer to choose to build. But parking reductions will not affect the rents on a project that is already feasible.

AFFORDABLE RESIDENTIAL DEVELOPMENT FINDINGS

Reductions in parking requirements would improve the financial feasibility of Affordable residential development on both sites. This analysis assumed that Affordable developments on either site would be financed through a combination of four-percent Low-Income Housing Tax Credits (LIHTC), private debt, and other sources.

- The analysis found that a no-parking development scenario on the Florence-Firestone site would require approximately $6.64 million in financing from other sources, after accounting for LIHTC financing and private debt. In a scenario that would require 0.5 spaces per unit for the development on that site, the amount of financing from other sources would total approximately $7.02 million, or $381,000 more than in the no-parking scenario.
- On the Valinda area site, the no-parking development scenario would require approximately $19.95 million in financing from other sources while the scenario with 0.5 spaces per unit would require approximately $20.93 million in financing from other sources, an increase of approximately $983,000.

Because assembling a financing package to fully cover the cost of an Affordable housing development can be extremely challenging, reducing these costs, even if small relative to total financing need from other sources, can have a significant positive impact on the likelihood of construction for an Affordable project.

SUMMARY

In summary we note the following:

- Higher parking ratios drive up the cost of development and in our scenarios may require developers to charge market-rate rents nearly 20% higher compared to no on-site parking, or 10% higher compared to more limited parking of one space per unit, in order for developers to achieve financial feasibility.
- Higher parking ratios result in fewer market-rate units developed with fewer than 50% developed on the Florence-Firestone site when comparing high versus low parking ratio scenarios. While the Valinda area site was modeled with similar unit counts, the medium and high parking scenarios required a second level of parking, reducing financial feasibility and the likelihood of such a project being built.
- Reduced parking requirements improve the feasibility of Affordable housing development, requiring 5% less in financing from other sources, when comparing a project with no parking required to one with 0.5 spaces per unit.
- “Missing Middle” housing is small-scale housing development with typically 15 units or less. Reducing or eliminating parking requirements supports the goal of creating more “Missing Middle” housing.

The difficult to quantify, but very tangible benefit of lower parking requirements, and the associated reduction in development costs and complexity of pursuing a multifamily project, should not be underestimated. Some developers with whom we spoke stated that uncertainty regarding public approvals, costs to develop, political

opposition, and the associated unpredictable timelines for the completion of a project represented very real obstacles to development. In this respect, the lower parking requirements, lower costs, along with more objective and predictable public approval processes facilitate the construction of housing units.

AB 2097 (Friedman)[1], a bill that would prohibit municipalities from establishing minimum parking requirements for residential or commercial developments within one-half mile of transit, is currently under consideration at the state level. An opinion piece published in the Los Angeles Daily News[2] on April 18, 2022 highlights studies that are consistent with findings of our analysis. Should this bill pass, it could presage state-wide increases in housing production with market-rate units that are more affordable as well as Affordable units.

[1] https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB2097
[2] https://www.dailynews.com/2022/04/18/parking-mandates-are-a-top-barrier-to-affordable-housing/

WALKER CONSULTANTS

October 3, 2022

Alyson Stewart
Senior Planner
County of Los Angeles Department of Regional Planning
320 W Temple St
Los Angeles, CA 90012

Re: LA County Residential Parking Study
Recommendations Report
37-009377.00

Dear Ms. Stewart:

The County of Los Angeles has hired Walker Consultants to prepare the following report that supports the County's efforts to update the parking requirements in Title 22 with the primary goal of facilitating the production of housing.

We appreciate the opportunity to be of service to you on this project. If you have any questions or comments, please do not hesitate to call.

Sincerely,

WALKER CONSULTANTS

Steffen Turoff

Principal, Director of Planning

Tania Schleck

Consultant

County of Los Angeles Residential Parking Study Recommendations Report

County of Los Angeles

October 3, 2022

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Introduction

Recommendations Background

Los Angeles County initiated a study of its minimum parking requirements to inform an update of Title 22 (Planning and Zoning) of the County Code for multifamily housing. The express goal of this effort is to facilitate the construction of much-needed housing units to help ameliorate the housing crisis in unincorporated areas of the County, in part to meet the County's Regional Housing Needs Assessment (RHNA) requirement to construct over 90,000 new housing units in this decade. An additional goal identified by the County has been the facilitation of a "greener" transportation system for County residents.

The urgency of this effort has only increased over the course of the study. Rent increases in Los Angeles County in the second quarter of 2022 was 14%.[1] Reform of the zoning ordinance to facilitate production of housing units cannot come too soon.

The findings of the multiple analyses undertaken as part of this study all conclude that minimum parking requirements significantly discourage the construction of new housing units, which leads to fewer housing units constructed and a resulting increase in the cost of housing.

Additionally, minimum parking requirements incentivize people to drive instead of using other modes of transportation, including transit, bicycling and walking, with all the associated traffic and emissions implications harms associated with that behavior.

Once again, the need for improvements to our transportation system has only been made clearer over the course of our study. Gasoline prices have increased to record levels, currently averaging over six dollars per gallon. Pedestrian deaths and other automobile related fatalities continue to increase as well. Parking represents the overlap between land uses and the transportation network. Reform for the sake of constructing new housing cannot be delayed but the need to create a more user-friendly, comprehensive transportation network cannot be ignored when reforming the parking ordinance.

As we have documented, our findings are consistent with numerous other studies of the topic nationwide, including many which have been conducted by experts in the field of parking and transportation in the Los Angeles area, including UCLA's Dr. Michael Manville and Dr. Donald Shoup.

As parking policy is situated at the intersection of transportation, land uses, and the use, management, and enforcement of the street, our study also brought to light other important considerations, that we identified as important for crafting meaningful recommendations:

- In most cases the elimination of minimum parking requirements typically does not reduce the amount of parking that is constructed for new housing because most developers seek to build parking spaces for their product (apartments) to be marketable. The benefits to housing production from lower parking

[1] Source: https://www.ocregister.com/2022/08/05/southern-california-rents-still-surging-amid-booming-tenant-demand/

requirements therefore comes primarily from the flexibility and predictability that a reduction in onerous requirements reduces risk for developers and spurs a greater willingness to pursue housing development.

- The public is experiencing parking congestion at the curb currently, and is therefore concerned that new multifamily housing will exacerbate on-street parking conditions, particularly if parking requirements are reduced.
- Our research and feedback from stakeholders communicated a desire for improved transportation options and dissatisfaction with the alternatives that exist to driving in much of the County currently, albeit with a few notable exceptions. The public is eager for alternatives to reliance on a car, including improved walkability and bikeability in their neighborhoods, and better transit service but also safe connections to the transit service. This could range from safer neighborhoods to better sidewalks and bike routes.
- The County in fact has numerous plans, policies, and capital improvements underway for the purpose of increasing and improving transportation options and service for residents of the unincorporated County. Yet parking and other transportation improvement efforts are spread across multiple County departments, making the coordination of solutions, including comprehensive parking and transportation ordinance challenging to implement. Therefore, the recommended amendments to the parking ordinance for multifamily housing in Title 22 may, of necessity, be limited in scope compared to a more comprehensive effort to address combined parking and transportation needs that all parties, within County government and the communities throughout the County, desire.

Summary of Study Findings Supporting Recommendations

The recommendations contained in this report were developed based on Walker's findings from the research and analyses conducted over multiple tasks and analyses performed since the inception of this study. We briefly summarize the findings by Task and subject matter below:

The Task 2.1 and 2.2 memorandum for this study explored Background Studies on Parking Requirements, and the studies of parking requirements' impacts on Development and Housing Costs. As part of this effort, Walker found abundant research and data demonstrating that minimum parking requirements present an obstacle to the construction of multifamily housing. The reduction or removal of minimum parking requirements was found to play a concomitant and important role in spurring the production of housing in jurisdictions across the country. In recent efforts related to zoning ordinance reform to produce housing units, the reduction or elimination of minimum parking requirements was found to play an outsized role in terms of its ability to spur more housing construction compared to other zoning reforms.

In the Task 2.3 memorandum, Demographic and Socioeconomic Data, we identified variations in car-ownership[2] between residents of multifamily and single-family housing units in Los Angeles, which demonstrated that residents of multifamily housing tended to own fewer cars than residents of single-family homes. The finding was counter to

[2] Throughout this document, we refer to parking demand and car ownership, to some extent interchangeably. We note that, in the case of residential parking demand, by far the greatest factor influencing parking needs is car ownership. For this reason, car ownership and parking demand are both referenced in the context of the need they generate for residential parking spaces.

the minimum parking requirement contained in Title 22 for residential uses, which requires more parking for multifamily housing (for two- and three-bedroom units) than for single family homes.

The Task 2.4 memoranda summarized the findings from the Walker team's data collection for parking demand, which we collected and quantified at over 30 multifamily properties across the County. We found that, on average, parking demand at market rate properties was 0.47 cars, 25% less than the typical parking requirement for market-rate, multifamily residential units.

As part of Task 2.4, we found that, on average, the parking requirement for Affordable housing properties was substantially lower than the actual parking demand observed and quantified. We noted that the parking requirement for Affordable housing in California is linked to the State's density bonus law, which in some instances may require jurisdictions to lower their parking requirements for Affordable housing units.

In the Task 3.3 memorandum we shared findings from interviews and surveys with housing developers and County staff to understand if and how minimum parking requirements present an obstacle to the construction of multifamily housing. A sample of the many findings from this effort included the following:

- Parking requirements increase the amount of land needed to build development projects. Small development projects can become economically infeasible if a parking deck or multi-story configuration is needed.
- A major cost impact is when requirements necessitate the construction of multiple levels of parking. The need for one additional parking space can result in the need to build an additional parking level, resulting in an increase of millions of dollars to the project budget.
- Project site constraints, especially on infill sites, have a significant impact on the extent to which projects can meet the parking requirements on-site and the cost of meeting the requirements on-site.
- Parking requirements impact affordability because they often result in the need to charge higher rents to justify costs.
- Parking requirements can lengthen the amount of time projects are reviewed in the development process. Zoning-related parking issues can result in lengthy reviews and more staff time to conduct the reviews.
- Developers rated the County's minimum parking requirements level of burden at 3.5, on a scale of 1 to 5, with 5 being the most burdensome.
- Satisfying minimum parking requirements is costly, often requiring an additional layer of financing, making a project more costly and complex to complete.
- The time, financial resources, and overall effort needed to satisfy or receive an exemption from minimum parking requirements can extend the time of the approval process materially, exacting a financial cost and adding risk to the project, sometimes to such an extent a project is unable to receive approvals. The precise nexus can be vague, but the impact is real. Obtaining project financing and navigating political opposition to projects represent real obstacles to projects. To the extent, minimum parking requirements can be lowered or removed, the construction of housing units will be facilitated.
- Developers stated that in most cases the preferences of potential tenants, their financing partners, or both, would force them to build parking for residential units, in some cases with the number being at the level of the current requirement. However, the *flexibility* in determining how much parking to build would facilitate the approval and financing process dramatically.
- Developers would welcome a landscape that offered more transportation options for their future tenants, so that less parking could be built. However, a lack of travel modes other than driving results in a market that requires reliance on car ownership and therefore parking. Several developers welcomed an in-lieu fee or parking district program that would create an environment that facilitated multimodal transportation access. However, such a program and policies do not exist.

In Tasks 4.1 through 4.4, we researched the experience of jurisdictions that had reduced or removed their parking requirements for multifamily housing and subsequently interviewed city staff members. Findings included:

- A variety of policy goals were cited as the basis for removing parking requirements. In several cases, these goals included a desire to facilitate housing construction.
- Most parking reforms were made recently enough so that studies on the impacts on housing construction were not available. However, research from San Diego and Minneapolis indicated that parking reforms had resulted in increased housing production.
- In many cases, the experience of each jurisdiction was incremental. Parking requirements were reduced or removed first near transit facilities or in dense downtown areas. By default, locations where parking requirements were removed tended to have on-street parking management policies, programs, and enforcement in place.
- Some cities, such as San Diego, required that developers put Transportation Demand Management (TDM) improvements and measures in place as part of the City's removal of minimum parking requirements. Unbundling the cost of parking spaces from rents and other policy measures were incorporated into most of the city codes that relaxed minimum parking requirements.
- Some cities undertook data collection efforts to understand and quantify residential parking ratios. Other cities were primarily policy driven, focusing on the policy goals and not the level of parking demand currently generated.

In Task 4.6, Walker performed a multi-faceted financial analysis of the impacts of parking requirements on the cost of building market rate and Affordable housing. We identified typical lot sizes for development in unincorporated areas of the County and ran a range of parking requirement scenarios to determine the financial impact of minimum parking requirements on the financial feasibility of several multifamily development scenarios.

- Lower parking ratios significantly improve the financial feasibility of market-rate development on both the smaller, transit-proximate urban infill site analyzed in Florence Firestone, and on a larger parcel in the more suburban unincorporated area of La Puente.
- Reduced parking ratios also improve feasibility by allowing more units on parking-constrained sites, which can be particularly important for achieving financial feasibility on small sites. The number of units that each site can accommodate is somewhat constrained by the number of parking spaces that will fit on the site.
- Reductions in parking requirements would significantly improve the financial feasibility of both market-rate and Affordable residential development on both sites.
    - Higher parking ratios drive up the cost of development. In our scenarios we found market-rate rents approached 20% premiums compared to no on-site parking, or 10% premiums compared to more limited parking of one space per unit.
    - Higher parking ratios result in fewer market-rate units developed with fewer than 50% developed on the Florence-Firestone site when comparing high versus low parking ratio scenarios. While the La Puente area site was modeled with similar unit counts, the medium and high parking scenarios required a second level of parking, reducing financial feasibility and the likelihood of such a project being built.
    - Reduced parking requirements improve the feasibility of Affordable housing development, requiring 5% less in financing from other sources, when comparing a project with no parking required to one with 0.5 spaces per unit.

In the Task 6 memorandum, Walker summarized the results of its outreach efforts to "core community voices," representatives of communities throughout the County. Key feedback we obtained from our meetings was the following, which we considered and incorporated into the development of our recommendations:

- Attention to Local Context and the uniqueness of the various communities throughout the County and that the study must address local issues and factors.
- Relationship with Other Studies and Efforts: Participants emphasized the importance of active and intentional coordination with other planning efforts undertaken by the County, such as active transportation plans and community plans like the East San Gabriel Valley Area Plan, the Florence-Firestone Community Plan, and others.
- Multimodal Network: In keeping with comments to address and appreciate local context, participants discussed the vast differences in the multimodal network, including bicycle, pedestrian, and transit access, across unincorporated Los Angeles County. Participants also referenced feelings of insecurity related to first mile/last mile efforts to access transit.
- Parking Management: Participants shared their personal experience of crowded, overused on-street parking resources in their neighborhoods and concerns over lack of on-street parking availability as a limiting factor for the ordinance work.

Key feedback from our community questionnaire was the following:

- Housing Affordability: Housing affordability is a critical issue in all five supervisorial districts, demonstrated by several findings:
    - 60% of respondents spent more than three months searching for a home within their budget last time they'd looked.
    - Over 70% of respondents who reported making $25,000 or less each year also reported spending at least 50% of their annual income on rent. 47% of respondents making less than $50,000 per year reported spending at least 50% of their annual income on rent, and 18% of respondents making less than $100,000 per year reported spending at least 50% of their annual income on rent.
- Parking Offerings: 74% of respondents living in multifamily apartment buildings reported that parking is offered for free as part of their housing; however, some respondents shared that only one parking space per unit is allocated and reported using on-street parking for their other vehicles. Only 6% reported no on-site parking offering at all, and 18% reported paying a separate fee for parking.
- Parking Usage: The street is an integral parking resource for many respondents—whether they live in a single-family home or a large apartment building. About one-fourth of respondents reported using the street as their primary parking option.
- Mode Split: Single-occupancy vehicles ranked highest as the primary travel choice for all five Supervisorial Districts. Supervisorial Districts 4 and 5 generally showed a higher willingness to telecommute for work or school, and use travel choices like transit, walking, biking and carpooling, although this willingness did not appear to have any impact on car ownership.
  Car Ownership: 16% of respondents reported owning one car or fewer. 37% reported owning two vehicles, and 46% reported owning more than two vehicles. Among multifamily residents, 35% reported owning one car or fewer. 44% reported owning two vehicles, and 19% reported owning more than two vehicles.

Finally, in our Task 7.0 memorandum regarding considerations around transportation demand management (TDM) and the relationship of those considerations to Title 22 parking ordinance, we looked at current TDM-related policy efforts across County government and communities to identify significant efforts undertaken and planned, albeit not always closely interconnected. We looked at the TDM policies of other jurisdictions and how those jurisdictions incorporated TDM measures in their parking policies. We particularly considered opportunities for capital or

"physical" TDM measures to incorporate into the ordinance that can be implemented and enforced by LA County Planning.

Goals of Recommendations

Section 22.112.010 (Purpose) in Title 22 explicitly states the purpose of minimum parking requirements, and this purpose statement was incorporated as part of a comprehensive update to the Parking Ordinance in Title 22 that was adopted in 1983. Recent research conducted since parking requirements for multifamily were established demonstrates that the current parking requirements in many respects do not achieve the rationale for parking requirements, and are now obsolete. The purpose, as defined in the code, shown in *italics*:

- *Establishes comprehensive parking provisions to effectively regulate the design of parking facilities and equitably establish the number of parking spaces required for various uses;*
    - The ordinance fails to establish the number of parking spaces equitably in that in some cases it requires more parking than is typically needed for many multifamily residents, effectively passing on the cost of the required parking to the tenants. Further, the ordinance impedes residents from utilizing as much or as little parking as they need by establishing a rigid number of spaces per dwelling unit and creating challenges to residents' ability to utilize as much parking as they need.

- *Promotes vehicular and pedestrian safety and efficient land use;*
    - The parking requirements do not promote efficient land use, but rather require that a disproportionately high amount of land, financial, and capital resources be devoted to the construction of parking.
    - Whether the purpose defined in the code is intended for internal circulation of vehicles on the site of the land use or the broader transportation network is unclear. However, by over-requiring parking in a manner that is inflexible, we suggest the current parking ordinance does not promote vehicle and pedestrian safety. Instead, the ordinance generates more single occupancy vehicle (SOV) trips than would a reduced number of required parking spaces. The parking requirements also contribute to a transportation network that discourages walking. We found this both in our literature review and meetings with the public.[3]

- *Promotes compatibility between parking facilities and surrounding neighborhoods and to protect property values by providing such amenities as landscaping, walls, and setbacks; and*

- *Establishes parking requirements to assure that an adequate number of spaces be made available to accommodate anticipated demand in order to lessen traffic congestion and adverse impacts on surrounding properties.*
    - Research shows that building parking to accommodate anticipated parking demand, particularly when not empirically determined, is more likely to generate additional traffic rather than lessen traffic. On a County-wide or network wide level, this creates a self-perpetuating cycle of reliance on the automobile.

[3] Note the Shoup articles and research and from our outreach.

Our recommendations are intended to remedy this portion of Title 22 Parking Ordinance to align with the policy goals of Los Angeles County.

To understand the basis of the recommendations set forth, we identify the following goals to craft the recommendations:

- Facilitate more housing production through changes to Title 22 Parking Ordinance, in an effort to increase the supply of units to meet the County's RHNA requirement that approximately 90,000 housing units be constructed by 2029, to address issues of housing affordability and availability.
- Flexibility in the parking requirement and approval process.
- Provide the public with modes of transportation other than SOV driving to:
  - Reduce parking demand:
    - To reduce parking spillover on to streets near multifamily housing; and
    - To lower the need to construct costly parking spaces that inhibit housing production;
  - Encourage more environmentally friendly means of mobility for County residents; and
  - Increase the availability of modes of travel for County residents that are less expensive than car ownership.
- Ease of understanding and implementation of Title 22 Parking Ordinance. The code requirements should not be complex for developers to understand and County planning staff to administer.
- Incorporate elements into Title 22 Parking Ordinance that facilitate improvements, flexibility and growth with changes that occur to the County's transportation network over time, because the network is growing and policies are improving, which could facilitate the creation of more housing.

With these goals in mind, we make the following recommendations for incorporation into Title 22 Parking Ordinance for multifamily housing.

Strategy Analysis and Recommendations

Walker's analysis has demonstrated that fewer required parking spaces will lead to the construction of more housing units, even if developers ultimately choose to construct more parking spaces than is required. At the same time, we have heard from the community about a desire and need for measures to make life easier without the need for LA County residents to own a car. This section of the report summarizes the strategies that Walker recommends to achieve the County's goals, which are described in the Introduction. Table 1, on the following page summarizes the strategies that Walker evaluated, and Walker's recommendations which fall into three categories:

- Short-term recommendations: measures that Walker recommends can and should be implemented in Title 22. These measures reflect physical (such as locational) aspects of the development being planned, which also include capital investments in the project that can be demonstrated on plans submitted to the County for the project.
- Long-term recommendations: measures that Walker recommends long-term that are either programmatic in nature and therefore require staff oversight and/or fall beyond the purview of Title 22 and LA County Planning to implement. These recommendations may also be characterized as operational in nature, in that they reflect ongoing activities rather than capital investments or physical aspects of the project. We recommend these measures to address the intent and goals of this study but recognize they cannot practically be included in Title 22 Parking Ordinance at this time.
- Not recommended at this time: recommendations that Walker evaluated, but do not believe are appropriate for LA County given existing conditions.

Table 1: Strategy Recommendations for LA County

	Short-Term Recommendation	Long-Term Recommendation	Not Recommended at this Time	Strategy
Strategies to reduce the number of required parking spaces per Title 22	X			1a. Eliminate the minimum parking requirements for Apartments with fewer than 10 units
	X			1b. Reduce the number of parking spaces required per dwelling unit in Title 22
				1c. Reduce parking requirements when sharing parking within mixed-use developments
	X			1d. Reduce parking requirements when sharing parking across properties
	X			1e. Reduce parking requirements when providing physical on-site TDM measures
		X		1f. Eliminate the number of parking spaces required per dwelling unit in Title 22
		X		1g. Reduce parking requirements when providing physical TDM measures off-site, and programmatic TDM measures
		X		1h. Implement a fee in-lieu of providing the minimum required parking spaces that can be used for transportation improvements
		X		1i. Establish TDM monitoring and reporting requirements
Other strategies to effectively increase the parking supply operationally, reduce parking demand, and manage parking spillover on the street	X			2a. Remove the requirement for covered parking spaces in Title 22
	X			2b. Eliminate any requirement that residential and commercial parking must be provided separately
	X			2c. Adjust the parking design standards in Title 22
		X		2d. Implement on-street parking management policies
		X		2e. Unbundle the cost of parking from the cost of the housing unit
			X	2f. Implement requirements for a maximum number of parking spaces allowed per dwelling unit.

Source: Walker Consultants, 2022.

1. Strategies to reduce the number of required parking spaces per Title 22

Walker recommends strategies to reduce the number of required parking spaces (per Title 22) based on our analysis, summarized as follows:

- From the responses to the Community Questionnaire, we found that housing affordability is a critical issue in all five Supervisorial Districts. As we found in our literature review, minimum parking requirements increase the cost of housing, roughly concomitant with the amount of parking required.
- In Walker's data collection effort, in which we surveyed 37 multifamily properties across unincorporated Los Angeles County, we found that Title 22 requires 0.47 more parking spaces per unit than observed parking demand (including those parked on-street that were assumed to live at the residential development). Based on this finding, Title 22 typically requires more parking per unit than is being used or needed.
- The Urban Land Institute's (ULI) empirically supported research for establishing parking ratios by land use predates the current movement to revise parking requirements taking place across the country. ULI's Shared Parking publication and model consists of parking ratios per residential unit established through parking data collection at hundreds of locations throughout suburban, auto-centric locations across the country. We emphasize that the ULI data was collected, and intended to be applied, in auto-centric, suburban locations. Yet, regarding parking demand for multifamily developments, the ULI parking ratios are generally lower than the parking standards required in Title 22.
- Walker reviewed numerous sources and studies that demonstrated minimum parking requirements have a substantial and negative impact on housing affordability and construction, which ultimately impacts housing affordability and availability.
- In Walker's financial feasibility analysis, we determined that lower parking ratios significantly improve the financial feasibility of market-rate developments in the sites that we evaluated. We also saw that reduced parking ratios improve the feasibility of building multifamily housing by allowing more units on parking-constrained sites, which can be particularly important for achieving financial feasibility on small sites. Further, we saw that reduced parking ratios may enable the construction of market-rate units at lower rents than would be possible with higher parking ratios. This finding was affirmed by our conversations with developers, where we found that minimum parking requirements can have a significant impact on project budgets, which again can affect the number of residential units constructed and even the decision whether or not to build a multifamily building.
- In our review of parking policies of cities around the country, many have reduced or eliminated minimum parking requirements for multifamily development to promote housing development and reduce transportation related greenhouse gas emissions.

This section includes an overview of each strategy that would reduce the number of parking spaces per Title 22 and Walker's recommendation for each strategy.

1a. Eliminate the parking requirement for Apartments with 10 or fewer units

Short-Term Recommendation

"Missing Middle" housing types provide diverse housing options, with smaller unit sizes, such as duplexes, fourplexes, cottage courts, and multiplexes. These smaller scale developments can be better scaled with existing residential neighborhoods. They are often more affordable than larger scale developments as they have fewer luxury amenities such as swimming pools, lobbies, and structured parking.

Through Walker's economic analysis (Task 4.6), we saw many vacant parcels in the County are smaller in size, making providing parking difficult to provide financially. Many of these smaller developments may not be able to provide transportation demand management amenities to qualify for a reduction in parking described in Strategy 1e on page 33. Further, given the small unit count, parking spillover onto residential streets is likely not to be as significant of an issue with developments with a greater number of units. Because of these reasons, Walker recommends that the minimum parking requirement is eliminated for Apartments with fewer than 10 units.

1b. Reduce the number of parking spaces required per dwelling unit in Title 22

Short-Term Recommendation

Walker recommends that the minimum number of parking spaces for Apartments as defined in Title 22 be reduced by 25 percent. Table 2 on the following page summarizes Walker's recommendations for minimum parking requirement reductions for Apartments. In mixed-use developments, this recommendation would only apply to the residential portion of the development. Commercial developments would still be required to provide parking as currently required in Title 22.

Table 2: Los Angeles County Minimum Parking Requirement Recommendations - Apartments

Land Use Type	Current Parking Requirement[1]	Proposed Parking Requirement
Apartments		
Bachelor	1 space/unit	0.75 space/unit
Efficiency and 1-bedroom	1.5 spaces/unit	1.125 spaces/unit
2+ bedrooms	2 spaces/unit	1.5 spaces/unit
Guest Parking for Apartment Houses with 10+ units	0.25 space/unit	0 space/unit

[1] Requirement per Title 22 Sec. 22.112.070
Source: Walker Consultants, 2022.

Walker also evaluated the parking demand at Affordable housing developments, including Affordable senior housing developments and mixed market-rate and Affordable housing developments. Affordable housing developments qualify for lower parking requirements per the Density Bonus Ordinance (Section 22.120.080) in Title 22. In comparing the current parking requirements (per Title 22) for Affordable housing developments to the ratios that we collected at the survey sites, we found the parking requirements are lower than actual parking demand. However, for both senior Affordable and mixed market-rate and Affordable housing developments, we found that the parking requirements are almost identical to observed parking demand. Therefore, Walker does not recommended changes to the Density Bonus Ordinance required parking ratios.

1c. Reduce parking requirements when sharing parking in mixed-use developments

Short-Term Recommendation

Shared parking allows for the sharing of parking spaces among uses in a mixed-use environment, in-lieu of providing the minimum number of required parking spaces for each individual use. In this way, it typically increases overall parking capacity; fewer parking spaces need to be built to accommodate the same number of cars. Each land use is able to fully satisfy its need for parking, but because they needs occur at different times fewer overall parking spaces are provided, resulting in lower costs to build parking and a more human scale design. For this reason, shared parking commonly results in a reduction of required parking spaces. This reduction, which is sometimes significant, depends on the quantity and mix of uses. Shared parking reduction can be most significant when uses have differing periods of peak parking demand. For example, a residential use is typically busiest overnight when residents are home and a retail use is busiest during the day during store hours. For mixed-use developments, allowing

developers to reduce their parking requirement due to their proposed mix of uses provides the developer with flexibility and reduces overbuilding of parking spaces.

Walker recommends adding a provision to Title 22 that allows for a parking reduction due to shared parking for mixed-use multifamily residential and commercial developments. Parking facilities should be able to be shared if multiple uses cooperatively establish and operate parking facilities and if these uses generate parking demand primarily during hours when the remaining uses are not in operation. The applicant should be required to prepare a parking study demonstrating the number of parking spaces recommended for the development based on the proposed mix of land uses, which takes into account the efficiencies from sharing parking spaces among uses.

1d. Reduce parking requirements when sharing parking across properties

Short-Term Recommendation

Sharing parking between properties can increase overall parking capacity for the same reason that sharing parking increases effective parking capacity on-site. For example, a retail parking lot may be underutilized overnight, while residential parking demand is high. The residential property owner and the retail property owner could establish a shared parking agreement such that residents can park in the commercial parking facility during certain hours of the day (likely overnight). Allowing properties to enter into shared parking agreements can improve the overall efficiency of the parking system. Further, allowing a portion of the parking requirement for a multifamily development to be met off-site can promote shared parking between land uses.

Title 22 already has provisions for allowing for off-site shared parking in certain specific plans and districts in unincorporated LA County. However, these shared parking provisions are primarily for commercial uses, not multifamily uses. It is typical for commercial land uses to have parking availability during periods of peak residential parking demand (late evenings) and at times during the day. Walker recommends that Title 22 include a provision that allows, if not facilitates, off-site shared parking between multifamily residential uses and commercial uses. Walker recommends establishing the following parameters for off-site shared parking:

- The off-site shared parking facility must be located within 1,320 feet (0.25 mile) from the multifamily property.
- The off-site shared parking facility should be clearly marked through signage demonstrating that parking for the multifamily use is permitted at certain times of day.
- The applicant must demonstrate, through a lease agreement or other arrangement, that both parties have agreed to the shared parking arrangement.

1e. Reduce parking requirements when designated physical on-site TDM measures are provided

Short-Term Recommendation

Some cities allow developers to earn a reduction in parking requirements with the provision of certain transportation demand management (TDM) measures. Because TDM reduces reliance of single occupancy vehicle (SOV) travel and promotes the use of travel other than SOVs, the overall need to own and park a car is reduced, which justifies a reduced parking requirement.

TDM measures typically fall into three categories, including:

- *On-site physical measures* – These are physical measures that the applicant would construct on-site on private property. Examples of on-site physical measures, often characterized as capital investments, include bicycle parking and car share parking spaces. The on-site physical elements discussed in this memo deliberately focus on elements that could be shown on site plans submitted as part of an approval, such as a building permit.
- *Off-site physical measures, or capital investments* – These are measures that the applicant would construct off-site, often in the public right-of-way. Examples of off-site physical measures include public sidewalk widening or provision of street furniture in the public right-of-way.
- *Programmatic measures, which can be characterized as operational measures* - These are programmatic measures designed to promote alternative modes of transportation, which are provided on an ongoing basis. Examples of programmatic measures include provision of transit passes or running a shuttle service to key destinations.

Because the purpose of the LA County parking study is to provide recommendations for changes to Title 22, off-site physical measures and programmatic measures are included later in this chapter as long-term recommendations that should be considered as part of a complete program, but fall outside of the purview of Title 22.

Over the course of outreach and communications efforts conducted for this engagement, Walker has heard from stakeholders both a desire for access to modes of transportation other than their personal vehicles and that this lack of access is an obstacle to reducing reliance on SOVs and the associated reduction in parking requirements.

Walker also heard from County staff and interested stakeholders about myriad efforts the County has undertaken to approve this effort; LA County has already made significant strides to establish a policy framework to support modes of transportation other than SOVs. Part of our goal for this recommendation is to ensure that the LA County Residential Parking Study acknowledges both the feedback provided and the efforts to enhance multimodal transportation that is currently being undertaken or planned.

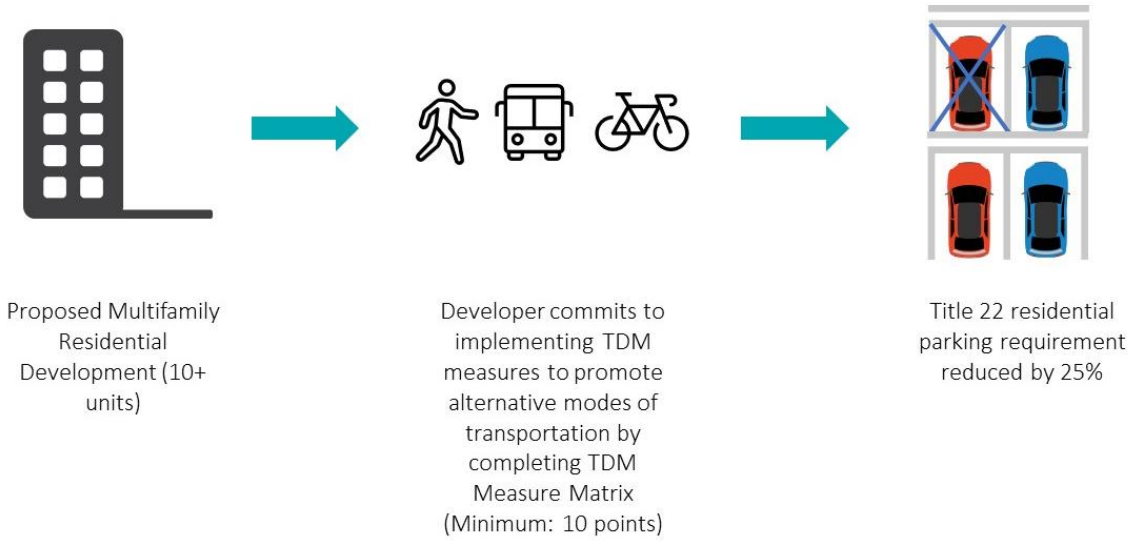
Walker recommends that for LA County, a further reduction in parking requirements (in addition to the reductions recommended in Strategy 1b) be permitted if the applicant implements TDM measures. This would establish a direct nexus between the provision of TDM measures and reduction in the minimum required parking spaces. One of the major concerns that emerged from the Core Community Voices outreach process was that reduced or eliminated parking requirements will result in more cars parked on the street in already parking-impacted neighborhoods. Community leaders also expressed a shared concern that there is a lack of viable driving

alternatives in LA County. Tying a further reduction in parking requirements directly to strategies to reduce reliance on SOVs will help reduce the need for parking and to address these concerns.

One of the major findings from the outreach that Walker conducted with developers and County staff was that an unpredictable discretionary approval process can inhibit the production of multifamily development. Therefore, Walker's recommended TDM approach is designed to be predictable, straight forward, easy to implement by LA County staff, and also flexible.

Walker recommends that if applicants are planning to construct 10 or more new dwelling units and satisfy the identified TDM requirements (by completing the TDM Matrix discussed later in this section and earning a minimum of 10 points), they will qualify for additional reduced residential parking requirement (25% reduction). If the development is a mix of residential and commercial uses, the reduction in the parking requirement would only apply to the residential portion of the development. Figure 1 illustrates the recommended TDM approach.

Figure 1: Illustrative Graphic of Recommended TDM Approach



Source: Walker Consultants, 2022.

Allowing flexibility is key to facilitating the production of housing units. Since every development and project is different, Walker recommends offering a menu of TDM measures (listed in Table 3 starting on the following page) that applicants can choose from. TDM measures are typically most successful when multiple complementary measures are implemented in tandem, in order to "move the needle" toward lower reliance on SOVs. Therefore, Walker recommends that multiple measures (a minimum of 10 points) be required to earn the parking requirement reduction. Table 3 summarizes the recommended TDM measures for LA County. The recommended measures were selected from a combination of the case study research Walker conducted and industry best-practices, combined with an understanding of the constraints and opportunities of transportation access within LA County. Each TDM measure has a point value. The owners of a multifamily property must ensure that a list of the TDM measures being offered is posted in a common area, that can be easily seen by residents. As occurs in many other cities, residents then provide a measure of oversight and compliance of the measures.

One of the findings from the discussions with developers and LA County staff is that the location of the project has a significant impact on how likely residents are to use modes of transportation other than SOVs. Therefore, points are awarded for proximity to transit, commercial establishments, and bike facilities.

Table 3: Recommended TDM Measures (TDM Measure Matrix) for LA County

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
Development Location				
Proximity to Transit	Any portion of the development is within one mile of a major transit stop, as defined by Section 21064.3 of the California Public Resources Code, and there is unobstructed access to the major transit stop from the development. "Unobstructed access to the major transit stop" means a resident is able to access the major transit stop without encountering natural or constructed impediments, including but not limited to, freeways, rivers, mountains, and bodies of water, but not including residential structures, shopping centers, parking lots, or rails used for transit.	3	Reliable high-frequency transit service in walking distance from residential uses promotes transit usage in lieu of SOVs.	Confirm the site is located in the required location as defined.
Proximity to Commercial Uses	Less than 0.5 miles from: 1. A commercial or retail development consisting of three or more retail or service uses, or 2. Three separate retail/restaurant/service/public park/school/fitness center uses.	1	Commercial uses in walking distance from residential uses promotes traveling via walking and biking	List the shopping center or retail/restaurant/service/recreational uses address(es) and distance from the project site in the project application.

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
	Less than 0.5 miles from a supermarket or general merchandise retailer of at least 8,000 square feet that sells fresh food.	2	versus traveling in a SOV.	
Proximity to Bicycle Facilities	Less than 0.5 miles from existing or proposed bicycle path, lane, route, or boulevard designated in the County of Los Angeles Bicycle Master Plan.	2	Proximity to bicycle facilities facilitates resident use of bicycling as opposed to driving.	Confirm the site is located in the required location as defined.
Development Design				
Provision of Affordable Housing Units	Provide a minimum 20% of the total units as affordable housing set-aside as defined in Section 22.14.010	2	Income has a significant effect on probability that a resident or commuter will use a commute mode other than SOV.	Demonstrate the Affordable units provided in the project application.
Unreserved Resident and Guest Parking	Set aside at least 50% of parking spaces as unreserved. Unreserved parking spaces are defined as those not for the sole use of individual residents but can be available to residents of more than one residential unit.	3	Assigning all parking spaces to specific units can reduce parking efficiency dramatically, resulting in the need to construct more parking spaces. Conversely, not assigning parking spaces allows for fewer parking	Display the unreserved parking spaces on the site plans.
	Set aside at least 25% of parking spaces as unreserved.	1		

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
			spaces to be constructed and for less parking spillover on the street.	
Pedestrian Entrance	Orient the building such that the main building entrance faces the street/sidewalk and is at or within four feet of ground-level.	2	Orienting the building toward the street promotes a more walkable environment.	Show the pedestrian entrance on the site plans.
Location of Parking	Locate the parking spaces such that they are away from the street or highway with the greatest right-of-way width, such as behind the building or underneath the building, or are obscured by landscaping.	1	Orienting parking behind or underneath the building, away from the public right-of-way prioritizes pedestrian access first and automobile access second.	Show the location of the parking in relation to the right-of-way on the site plans.
Pedestrian-Scale Lighting	Install and maintain ground-mounted ornamental light fixtures of no more than three feet in height for pedestrian paths and entrances to the property. Ensure that pedestrian walkways are illuminated. Lighting affixed to the building exterior should illuminate the sidewalk along the main building façade oriented toward the street or highway with the greatest width, with an average of one foot candle along	3	Low-level lighting helps to provide security for pedestrians to navigate in and around the development.	Show the lighting on the site plans.

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
	the sidewalk for the length of the property along said street.			
Pedestrian-Scale Amenities	Install and maintain pedestrian scale amenities on or adjacent the property consisting of no less than 3 benches of at least five feet in length and no less than 3 structures for the purpose of providing shade to pedestrians or seated individuals of no less than 8 feet in diameter or 64 square feet per structure.	2	Providing benches and shade structures promotes a walkable, more pedestrian-friendly environment.	Show the pedestrian-scale amenities on the site plans.
Transparent Windows and Doors on the Ground Level	Provide transparent windows and doors on at least 50 percent of the building's ground floor facade oriented towards the street or highway with the greatest right-of-way width shall be composed of entrances.	1	Clear glass maintains a visual connection between the interior and exterior and maximizes the visual connection to the street.	Show the transparent windows and doors on the site plans.
Public Art	Install and maintain a static public art piece, such as a mural or sculpture that is visible to the public.	1	Public art enhances the pedestrian-scale experience.	Show the public art on the site plans.
Preferred Land Uses				
Healthy Food Retail	Construct and maintain a commercial space (minimum of 1,000 square feet) that can be readily occupied and is reserved for a healthy food facility within the	5	Provision of on-site healthy food allows on-site residents to access healthy food without the	Show the designated commercial space for healthy food retail on the site plans.

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
	development. A healthy food facility includes a facility that provides for daily needs and can include fresh fruits, vegetables, whole grains, and dairy products, as is identified as a bodega, in some communities, to remain open for at least eight hours per day, six days per week. The additional commercial square footage shall be exempt from any requirement for parking, as it will be considered an auxiliary use of the residential property.		need to drive via an SOV. The healthy food establishment would also benefit the surrounding community.	
On-Site Childcare Provider	Construct and maintain a commercial space that can be readily occupied, and is reserved for, a licensed childcare center within the development. Preference should be made for the children of building residents. The additional square footage will be exempt from any requirement for parking, as it will be considered an auxiliary use of the residential property.	5	Providing on-site childcare reduces the need for residents to drive for childcare needs.	Show the designated childcare facility location on the site plans.
Fitness Center (resident-only)	Construct and maintain an indoor or outdoor fitness center at the property. The fitness center shall be available to residents at least 12 hours/day and 7 days/week and provide a minimum of 4 workout stations. The additional square footage will be exempt from any requirement for parking,	2	Providing an on-site fitness center reduces the need for residents to drive to a gym or fitness center.	Show the fitness center location on the site plans.

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
	as it will be considered an auxiliary use of the residential property.			
Fitness Center (public)	Construct and maintain an indoor or outdoor fitness center at the property. The fitness center shall be available to the public at least 12 hours/day and 7 days/week and provide a minimum of 4 workout stations.	3	Providing an on-site fitness center open to the public provides a fitness opportunity for neighborhood residents, reducing the need to drive to a gym or fitness center.	Show the fitness center location on the site plans.
Public Art and Cultural Spaces	Construct and maintain an indoor or outdoor space dedicated to public art and culture, such as, but not limited to, gallery, museum, theater studio, and community workshop spaces. Hard art such as a sculpture or mural is not eligible.	3	Public art enhances the pedestrian-scale experience.	Show the public art on the site plans.
Car Share				
Car share parking	Designate spaces for car share parking according to the number of residential units and offer the spaces to a car share company at no cost. A car share is defined as a service provided through which licensed drivers may rent a vehicle for personal transportation and return the vehicle to the same location at the end of	2	Designating some spaces for carsharing vehicle parking supports a car-free or car-lite lifestyle for residents of the development. It can reduce vehicle ownership if provided	Show the car share parking spaces on the building plans. Car share spaces must be offered to a car share company at no cost.

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
	the trip. Car share space requirements shall be as follows: 5-100 units – 1 car share space 101-300 units – 2 car share spaces Each additional 200 units – 1 additional car share space A parking permit is not required to attain TDM points for providing car share parking.		with abundant and reliable car sharing service.	
Bicycle Amenities				
Provision of electric bicycle docking and charging stations	Provide and maintain an LA Metro or other shared electric bicycle docking and charging station on-site with a minimum of 5 publicly available electric bicycles.	2	Providing a fleet of shared electric bicycles provides residents with the opportunity to use a bicycle without the need to own a bicycle.	Show the electric bicycle docking station on the site plans.
	Provide electrical charging outlets within the parking facility or common area for at least ten percent of the required long-term bicycle parking spaces.	2		Show the electrical charging outlets on the site plans.
Provision of required bicycle parking spaces	Provide the required bicycle parking spaces (per Title 22):	1	Secured bike parking facilities allow employees to commute on bicycles with peace of	Show the bicycle parking spaces on the site plans.

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
	Short-term bicycle parking – 1 spaces/10 units (minimum 2 spaces) Long-term bicycle parking – 1 spaces/2 units		mind that the bicycles will be safe and available at the start and end of the workday.	
Provision of bicycle parking spaces beyond the requirements	Provide at least 25 percent more bicycle parking spaces (long-term or short-term) than the minimum required (per Title 22).	1	Secured bike parking facilities allow employees to commute on bicycles with peace of mind that the bicycles will be safe and available at the start end of the workday.	Show the bicycle parking spaces on the site building plans.
Provision of an on-site bicycle repair station	Provide and maintain in working order a bicycle repair station that includes tools and supplies designed to maintain bicycles, at a minimum those necessary for fixing a flat tire, adjusting a chain, and performing other basic bicycle maintenance.	1	Bicycles often need minor repair and maintenance. One way of easing the use of bicycles is to provide a repair station or space to work on bikes and the tools necessary to do the work. Providing access to a room or facility would provide would-be cyclists with confidence to ride their bicycles and	Show the bicycle repair station on the site plans

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
			be sure they can resolve any mechanical problems that may arise.	
Transportation Information Provision				
Display TDM measures provided in common area	Post a list of the available TDM elements in an accessible and common area where it can easily be seen by residents.	Required for all projects that earn the minimum number of points to quality for the parking reduction	For TDM measures to be effective, it is critical that residents know of all of their TDM options.	Show the location of the TDM measure list on the site plans.
Transportation information center or screen	Install and maintain an on-site kiosk or information center with multi-modal wayfinding information and transit information on a display with dimensions no smaller than 18 inches by 24 inches. The kiosk or information center shall be located in a prominent location that will easily be seen by residents entering or exiting the development.	1	Providing users with information about all mobility options that are available near the development helps make residents aware of their transportation options and how to access/use those options.	Show the transportation information center or screen on the site plans

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
Real-time transportation information displays	Maintain a real-time information display (e.g., large television screens or computer monitors) in a prominent location that will easily be seen by residents entering or exiting the development. The displays should include real-time information which may include, but is not limited to: transit arrivals and departures for nearby transit routes, walking times to transit stations/bus stops, and the availability of car share vehicles, shared bicycles, electric bicycles, and shared scooters or comparable modes, as determined by Planning staff.	2	A "Transit Screen" that aggregates information in real time for all modes including rail, bus, and shuttle, as well as ride-hailing, car sharing, bike and scooter sharing services. Providing real-time data helps provide up-to-date information for residents so they can feel confident using an alternative mode.	Show the real-time transportation information displays on the site plans
Storage and Delivery				
Child Transportation and Sports Equipment Storage	Provide and maintain in working order on-site lockers or another secure storage facility for personal car seats, strollers, child bicycle seats, and sports equipment according to the following: 1. One secure storage location per every twenty dwelling units, with a minimum of two secure storage spaces. 2. The secure storage spaces shall each have useable interior space that is at	2	Providing a storage area for child transportation equipment helps families utilize alternative transportation services such as ride hailing services and car share services.	Show the child transportation storages areas on the site plans

TDM Measure	Metric	Points Value	Rationale	Method of Demonstration
	least 35 inches high, 25 inches wide and 30 inches deep.			
Delivery Support	Provide a secure area for receipt of deliveries that offers at least one (1) of the following: 1) Closed lockers 2) Temporary storage for packages, laundry, and other deliveries 3) Temporary refrigeration for groceries	2	Encouraging use of delivery services reduces reliance on SOVs to run errands.	Show the secure delivery receipt area on the site plans.

In Strategy 1b, Walker recommended a reduction in parking requirements for Apartments. The proposed 25 percent TDM reduction would be in addition to the reductions recommended in Strategy 1b.

For multifamily projects that already qualify for reduced parking requirements per Title 22, the 25 percent reduction would be in addition to the permitted reduction. Examples of existing reductions permitted per Title 22 include:

- Density bonus projects that qualify for parking reductions per Title 22 Sec. 22.120.080.
- Reductions allowed for in TOD Specific Plans.
- Reductions allowed for in the MXD zone.

Table 4 includes the recommendations for a TDM process for multifamily housing development projects for LA County, as described above.

Table 4: Recommended LA County TDM Process

Step Number	Step	Responsible Party
1	Applicant determines whether they are eligible for the reduced parking requirements.	Applicant
2	Applicants completes the TDM Measure Matrix and demonstrates a minimum of 10 points.	Applicant
3	Applicants submit the required method of demonstration for each TDM measure as specified in the TDM Measure Matrix with the project application.	Applicant
4	Planning staff reviews the TDM Measure Matrix and verifies that the applicant has provided the necessary method of demonstration for each measure with the project application.	Los Angeles County Department of Regional Planning
5	If the development project is approved, all TDM measures identified in the TDM Measure Matrix are included as Conditions of Approval for Conditional Use Permits or discretionary housing permits or Statements of Approval for ministerial site plans.	Los Angeles County Department of Regional Planning
6	Upon project approval, the applicant constructs all TDM measures to which they have committed and maintains a list of TDM measures offered at the building in a common area that residents can easily see.	Applicant

Source: Walker Consultants, 2022.

1f. Eliminate the number of required spaces per dwelling unit in Title 22

Long-Term Recommendation

As noted in our literature review, voluminous research demonstrating the benefits of eliminating minimum parking requirements, including the facilitation of multifamily housing production, has led to an increasing number of cities eliminating parking requirements for multifamily housing and other land uses. That trend continues, with cities continuing to eliminate parking requirements over the course of our study.

With some exceptions, cities that have eliminated parking requirements have typically done so gradually over time, often starting with dense downtown areas or other locations near high-quality transit. These cities also typically have higher density of development, more transit and mobility options (including robust pedestrian and in some cases bicycle networks), and more on-street parking management (permit districts, time limited, or paid parking) than much of unincorporated LA County.

The community (residents, county staff, even many developers) has expressed the need for more viable alternative transportation options that could replace the need to drive and ultimately car ownership altogether. In most cases, these alternatives would not replace someone's reliance on their own car altogether (although it could), but in many cases would encourage a resident to forego a second or third vehicle. Reductions in parking demand have wide ranging policy benefits but typically occur at the margin.

The lack of access to viable transportation other than owning one's own automobile creates an obstacle to reducing reliance on SOVs. While this need not preclude the elimination of parking requirements (our study has found that developers tend to build parking based on what they think tenants will demand, not only the requirement), it may make justification to the public for eliminating parking requirements more challenging.

Relatedly, Walker believes that two other considerations should be recognized, which is the reason we have incorporated TDM components into the ordinance:

- The County has a number of efforts and initiatives underway to provide transportation alternatives to residents of unincorporated LA County, ranging from an expanding transit network (for instance the West Santa Ana Line), the creation of transit-oriented districts, an updated bicycle plan, and an upcoming County-wide TDM plan, to assist in remedying the lack of transportation options we have noted. We suggest it would behoove the County to include supportive transportation measures within the parking ordinance for Title 22, to the extent reasonable, rather than simply eliminating parking requirements.
- Required parking represents an important and costly capital investment (terminal capacity for automobiles) through which the private sector contributes to the public roadway network. The reduction in that requirement, for those developers who take advantage of it, represents a tangible "windfall." While we hope some of that windfall gets captured in the production of more housing units, we believe it is reasonable that developers be asked to support other components of the transportation system that further the County's broader transportation and housing goals. The TDM recommendations are intended to capture a portion of this windfall for the identified purpose.

Beyond the ordinance, there are other considerations as well. Parking requirements are related to parking demand on the street. When eliminating parking requirements, on-street parking management, an effort that is less robust

in unincorporated parts of the County than in many cities and districts that have eliminated parking requirements, becomes more critical. Our understanding is that the County is making efforts to perform more robust on-street parking management efforts. The housing crisis is sufficiently severe that reducing parking requirements cannot wait for a fully formed, district-by-district, or county-wide parking management program to be implemented. Yet, arguably a full elimination of parking requirements cannot occur until that parking management program is in place.

Finally, TDM implementation requires an active effort and feedback to occur based on the policies implemented. Walker recommends that LA County monitor the impact of the proposed reductions recommended in this report and consider eliminating parking requirements for multifamily housing near transit in the future. The County should embark on an effort to monitor TDM efforts at the same time it puts in place formal incentives for programmatic TDM elements.

To reiterate, the elimination of parking requirements is good policy, as it would result in the production of more housing and, in the long run, support the County's goals with regard to transportation, lower emissions, and equity. The County should move toward, and eventually eliminate parking requirements. Our recommendation to both reduce parking requirements and use TDM measures to reach parking requirements significantly lower than the current requirements, particularly in locations near transit and walkable locations, is intended to provide a nuanced and pragmatic approach to lowering, and eventually eliminating, parking requirements that is sensitive to the context and diverse transportation needs of the County.

1g. Reduce parking requirements when providing physical off-site and programmatic TDM measures

Long-Term Recommendation

In addition to physical on-site TDM measures, there are also physical off-site measures and programmatic TDM measures that can be very beneficial in facilitating the use of alternative modes of transportation (other than a SOV), to the point that they enable some residents to be able to give up the ownership of a vehicle and need for the parking space.

Examples of programmatic TDM measures that could be applied to multifamily development include:

- Provide residents with transit passes or transit pass subsidies.
- Provide an on-site bicycle or electric bicycle fleet for resident use.
- Implement a car share program by partnering with a car share provider or managing a car share program.
- Require that the developer provide an on-site TDM Coordinator (can be a property manager) to provide multi-modal and wayfinding information, carpool matching, and walking/bicycle group coordination. The TDM Coordinator may also interface with the County on TDM program monitoring and reporting.
- Unbundle the cost of parking from the cost of the residential unit, a program to be run by and as part of the building's property management.
- Provide residents with an orientation package with information about non-SOV transportation options.

Improving the bicycle and pedestrian infrastructure surrounding the multifamily development is helpful to connect residents with surrounding land uses without reliance on a car. Some key off-site TDM measures that apply to multifamily properties include:

- Improve sidewalks around the property, including widening to allow for ADA-required widths and curb cuts.
- Install transit shelters, benches, and other street furniture.
- Introduce traffic calming measures on the streets.
- Implement safe pedestrian crossings around the development.
- Bicycle, pedestrian and/or transit access improvements.

The majority of cities that Walker surveyed have both physical on-site TDM measures and also programmatic measures as part of their TDM ordinances. Many cities also have off-site physical TDM measures as part of their menu of TDM options. Walker recommends that in the long-term, as LA County's TDM Plan gets further established, LA County include both physical off-site TDM measure as well as programmatic TDM measures in the options of the TDM Measure Matrix. Including these measures will provide developers more options to reach the required 10 points and provide tenants with alternatives to car ownership and the associated parking. LA County should also consider increasing the percentage of parking reduction as a result of implementing TDM measures if developers implement additional measures with a combination of physical and programmatic TDM measures.

1h. Implement a fee in-lieu of providing the minimum required parking spaces

Long-Term Recommendation

Allowing developers to pay a fee in-lieu of providing a portion or all of the minimum number of required parking spaces can provide benefits to developers similar to a reduction in parking requirements. The benefits to tenants, the public, and County government depends on the uses to which fees are directed, and the amount at which fees are set.

Developers gain flexibility in meeting minimum parking requirements and can save money on building expensive structured or surface parking spaces. The space and resources saved on-site that would otherwise have been allocated to parking can be used for more people-centric uses, including more housing units. By giving developers options other than physical parking space to satisfy minimum parking requirements, the County can ensure that parking is provided in the most efficient way possible. In-lieu fees can also facilitate the development of constrained sites, such as those near transit stops, that may otherwise not be developed due to the need to provide the required parking.

The other side of the in-lieu fee equation is to what uses the fees are allocated. Those uses and the amount of the fee are a policy decision. In-lieu fee revenue has historically been used to fund the construction of parking spaces in a commercial district that can be shared between multiple uses. But depending on policies and interpretations, in-lieu fee revenue can also be used to fund access equivalent to what parking spaces provide. This access can include infrastructure improvements or operational programs that improve access for drivers, but also cyclists, transit riders, and pedestrians. Examples of improvements that can be funded by in-lieu fee revenue that promotes greater access and more walkable areas include:

- Bicycle and scooter parking, a bike or scooter share program, or bicycle valet program.
- Pedestrian-related improvements, including lighting and street amenities, that increase safety.
- Transit-related improvements, such as transit passes for residents or employees, as well as expanded service or new bus shelters.

- Creation of a "shared mobility hub" or central location in neighborhoods and areas of high parking demand that provide a single access point to a range of transportation options and services.
- A transportation demand management (TDM) program for employees in a community or district to provide amenities that encourage people to walk, bike, ride transit, or carshare instead of drive.
- Wayfinding systems to help facilitate the use of existing parking resources, rather than building more spaces.
- A shared parking program, where cities lease existing parking spaces from commercial and other private parking owners and incorporate the spaces into the public parking supply.
- Payment into an established neighborhood fund or parking benefit district that manages on-street parking through parking permits, paid parking, and increased parking enforcement.
- A car sharing program establishing a network of shared cars throughout LA County.
- A neighborhoods electric vehicle program, operated with speed-limited battery power electric vehicles, which provide locally serving trips.

A parking in-lieu fee can be a useful tool in providing developers with the flexibility in meeting their minimum parking requirements without having to construct parking spaces which, particularly at the margin, may not prove to be cost effective. As we heard from the Core Community Voices outreach effort and through discussions with developers and LA County staff, providing alternative modes of transportation, other than a SOV, is critical to lowering the demand for parking. The in-lieu fee revenue can be used to support transportation alternatives such as those discussed in the "Strategy Overview" section.

Walker recommends that the fee is charged on an ongoing basis for at least a 10-year period to establish a consistent revenue stream to support the programs established with the fund revenue.

Walker recommends that a parking in-lieu fee be established by the County but as a long-term recommendation, as an in-lieu fee program requires staff to oversee the program and manage the in-lieu fee fund. We recommend that an in-lieu fee program be established once a clear use of funds for access, transportation, and parking-management improvements, including improved parking enforcement, have been identified and established.

1i. Establish TDM monitoring and reporting requirements

Long-Term Recommendation

In the long-term, if LA County expands the TDM ordinance to include programmatic TDM measures and physical off-site TDM measures, Walker recommends implementing TDM monitoring and reporting requirements. Ongoing TDM performance monitoring helps to ensure that the TDM measures that a committed at effectively implemented. Some best practices for TDM program administration and performance monitoring include:

- Prior to issuing the Certificate of Occupancy, County staff should physically inspect the property to ensure that physical on-site TDM elements have been installed.
- Require developers to submit an annual TDM monitoring report, and conduct a staff review of the report.
- Issue an annual transportation survey to residents that captures data on how residents travel to and from the site and their attitudes toward alternative commute modes and satisfaction with available mobility options.

2. Other strategies to effectively increase the parking supply operationally, reduce parking demand, and manage parking spillover on the street

There are a variety of policy strategies that would not reduce the number of required parking spaces per Title 22, but can increase parking efficiency at multifamily properties and/or reduce the need for parking spaces to be constructed at multifamily properties. This section includes an overview of each strategy that could improve parking efficiency and/or reduce parking demand and Walker's recommendation for each strategy.

2a. Remove the requirement for covered parking spaces

Short-Term Recommendation

As discussed in Strategy 1b, Walker recommends reducing parking requirements per Title 22, which requires multifamily developments to provide both covered and uncovered parking spaces. Covered parking spaces in the form of single or double garages can be more space intensive and limit the ability to share parking. Therefore, eliminating the number of required covered parking spaces can improve the efficiency of the parking system. Walker recommends that the requirement for covered parking spaces for Apartments (as defined in Title 22) is removed from Title 22.

2b. Eliminate any requirement that residential and commercial parking must be provided separately

Short-Term Recommendation

In Title 22, in several zones, including the MXD zone and C-MJ zone, parking for commercial and residential uses must be separately designated by posting, pavement marking, or physical separation. Parking is most efficient when it is shared between uses and not reserved for specific uses. Therefore, Walker recommends that all references to separately designating parking for commercial and residential uses are removed from Title 22.

2c. Adjust the parking design standards in Title 22

Short-Term Recommendation

Walker reviewed the parking design standards in Title 22 to determine opportunities for increased efficiency and reduced land and resources (financial and materials) devoted to parking. Through Walker's financial feasibility analysis, Walker determined that the County's requirements for drive aisle width and parking space length are

unnecessarily generous for residential land uses, and that reducing each would be acceptable and yield cost and spatial efficiencies, potentially yielding more spaces or area that could be devoted to other uses.

Walker's recommended drive aisle width and parking stall length are based on parking standards Walker has developed over decades of ongoing research, including average vehicle sizes. The research is incorporated into the publication *Parking Structures: Planning, Design, Construction Maintenance and Repair* Third Edition, and internal updates Walker makes. This publication represents industry standards for parking structure design and provides the only single-source guide to planning, designing, and maintaining parking structures. For this recommendation, Walker utilized Level of Service C standards, which is efficient and reasonable for residential development. Level of Service A standards are typically applied to land uses such parking for restaurants where customers are not as familiar with the parking facility and park in the location infrequently. Residential parking facilities are typically used by residents who park on a daily basis and are familiar with the parking facility, and therefore able to navigate the facility more effectively than, for example a customer parking at a shopping mall.

Table 5 includes Walker's recommendations for drive aisle width reductions in Title 22. The drive aisle width requirements vary based on the angle of the parking space the aisle serves.

Table 5: Los Angeles County Title 22 Recommended Drive Aisle Width Adjustments

Angle of Parking (Degrees)	Current Title 22 Aisle Width Requirement	Proposed Title 22 Aisle Width Requirement	Aisle Configuration
90	26 feet	24 feet	Two-Way Aisle
60	20 feet	14 feet, 7 inches	One-way aisle, double-loaded parking
45	14 feet	12 feet, 8 inches	One-way aisle, double-loaded parking
30	12 feet	12 feet	One-way aisle, double-loaded parking

[1] Requirement per Title 22 Sec. 22.112.080
Source: Walker Consultants, 2022.

Table 6 summarizes Walker's recommended stall length requirement. Walker recommends that the Title 22 stall length required is reduced by six inches.

Table 6: Los Angeles County Title 22 Recommended Parking Stall Length Adjustments

Angle of Parking (Degrees)	Current Title 22 Stall Length Requirement[1]	Proposed Title 22 Stall Length Requirement
90	18 feet	17 feet, 6 inches

60	18 feet	17 feet, 6 inches
45	18 feet	17 feet, 6 inches
30	18 feet	17 feet, 6 inches

[1] Requirement per Title 22 Sec. 22.112.080
Source: Walker Consultants, 2022.

Walker performed a calculation of the approximate amount of land that could be gained by using Walker's recommended parking geometrics. Table 7 summarizes Walker's calculations of the amount of land that could be saved. According to Walker's calculations, developers could use approximately 14 percent less space for parking with Walker's parking geometric recommendations.

Table 7: Estimated Space Saved with Walker's Parking Geometrics Recommendations

Angle of Parking (Degrees)	Approximate Space Saved	Approximate Percentage of Space Saved
90	25.5 square feet	5%
60	82 square feet	14%
45	58 square feet	10%
30	27 square feet	4%

Source: Walker Consultants, 2022.

2d. Implement on-street parking management

Long-Term Recommendation

As Walker learned through the Core Community Voices outreach effort, management of on-street parking was an issue of great interest for many participants. Participants shared their challenges with on-street parking availability in their neighborhoods and the tendency to use on-street parking for long-term vehicle storage. They also stressed the importance of expanding enforcement regulations and capabilities in tandem with changes to the parking ordinance. Many suggested that parking management and concerns over lack of on-street parking availability as a limiting factor for the ordinance to work, based on their concerns regarding parking spillover.

On-street parking management is outside of the scope of Title 22. A study and recommendations for parking management in East Los Angeles was finalized for the County's Chief Operating Officer in 2021, the recommendations for which may have relevance to this study. With the reductions in minimum parking requirements, on-street parking management is a consideration. At the same time, we note that the nexus is not always clear or direct. More parking spaces may be required for a building, yet drivers are sometimes inclined to use on-street parking spaces regardless of off-street parking space availability. With these considerations, we raise the following policy considerations and recommendations for the County to implement outside of Title 22:

On-street Parking Regulations and Enforcement

Establishing parking regulations that meet the needs of the land uses lining a street are necessary for on-street parking spaces to play a productive role in the community. For starters, actively enforcing the existing or typical parking regulations can ensure parking availability for the intended parkers, and that on-street parking spaces be used actively, by drivers in the community, and not for long-term storage of vehicles, which is typically not a desired or efficient use.

Properly enforcing on-street also encourages those drivers who have available off-street parking to use their off-street parking spaces and not overly rely on street parking when they have other options. Active enforcement can include enforcement of violations including but not limited to:

- Prohibition against parking for greater than 72 hours.
- Planned non-operation of vehicles (PNO).
- Other restrictions on street parking

Residential Parking Permit Districts

Implementation of residential parking permit districts is an on-street parking management tool for parking enforcement, to ensure parking availability for the intended parking users. Limiting or restricting parking on residential streets can improve parking availability for residents and enhance quality of life and safety in neighborhoods. The following should be considered if establishing residential parking permit districts:

- The number of parking permits issued to each household requires a strategy for allocation of permits. This typically includes a limit on the number of residential parking permits per dwelling unit. In primarily residential areas with few commercial uses, the parking demand on residential streets is largely derived from vehicles that belong to residents themselves. Particularly in areas with high housing costs, including unincorporated LA County, there may be more vehicles per dwelling unit anticipated, or residents may

choose to use their garages as living or storage space, resulting in more vehicles parked on the street. In these cases, providing unlimited permits for residents would not necessarily improve parking availability. A priority for allocation is key.

- It is a best practice for parking permits to have a fee, ideally which is graduated based on the number of permits issued per household (i.e the cost for the second permit is higher than the cost of the first permit, the cost of the third permit is higher than the cost of the second permit, etc.). Charging a fee is important to provide funding for LA County to enforce the permit program. A fee also helps to manage on-street demand by encouraging only residents who need a parking permit to get one.

Parking Benefit Districts

Parking benefit districts (PBDs) are geographically defined areas, in which the parking supply and revenue it may generate are focused on managing parking supply and demand to ensure that the parking serves the district.

Revenue generated within a PBD is returned to the district to pay for neighborhood improvements that are prioritized by local stakeholders. Revenues may fund improvements such as operational or capital improvements to the parking supply, sidewalk cleaning, installing of planters or street trees, and store front beautification projects, among others. It can also fund parking and access improvements. A focus of PBDs is therefore to return revenues to the local community such that it can maintain an attractive and thriving commercial district, the broader goal of an effective parking system.

Funds for a PBD can potentially come from a number of sources, including parking permits, paid on-street parking, and in lieu fees, where a parking and access nexus can be identified. Sidewalk improvements are an example of a benefit that improves transportation and the general ambience of a district. One advantage of PBDs is that business owners and residents of the nearby district see where parking generated locally is directed in their community, and therefore may be more supportive of parking permits, in lieu fees, and paid parking as well, when they see the possibilities of local benefits. The appeal of PBDs over simply charging for parking in some respect is that PBDs ensure that some parking revenue generated locally benefits the district.

One of the most recognized examples of a successful parking benefit district is in Pasadena, in the City's Old Pasadena historic core. Old Pasadena is characterized by historic buildings with little to no off-street parking. During the 1980s, Old Pasadena had high commercial vacancies, unkept and deteriorating buildings, and crime. The low supply of on-street parking, combined with the free parking on-street, resulted in high on-street parking demand and little turnover, limiting the parking opportunities for customers. To reinvigorate the area, the City of Pasadena implemented paid parking with the promise that all parking meter revenue generated within Old Pasadena would be returned to the neighborhood. As paid parking increased turnover of on-street spaces, more customers were able to patronize local businesses, resulting in increased sales tax revenue for the City. The parking benefit district funded public improvements, which made the area more attractive to customers in the area and further increased business.

2e. Unbundle the cost of parking from the cost of the housing unit

Long-Term Recommendation

At multifamily properties, the cost to provide parking is material, but typically included with the cost of the residential unit as "bundled parking." For example, if a resident rents a two-bedroom apartment, they may receive

two parking spaces as part of their lease, regardless of whether they have one, two, or three cars. "Unbundling" refers to separating the cost of parking from the total rent, which does not recognize variations in preference for the number of parking spaces.

The goal of parking unbundling is to allow residents to choose whether they want to purchase a parking space. The cost of the housing unit should be less if parking is unbundled than if parking is bundled. Unbundling can lower demand for parking at multifamily properties, as only those who choose to pay for parking receive a parking space. Using the previous example, a family renting a two-bedroom apartment may choose to only have one car to lower their monthly rent. Otherwise, parking becomes a sunk cost for car ownership, encouraging the owning and storage of more cars. Unbundling can have the added benefit of lowering housing costs for residents who choose not to purchase parking.

Unbundling can be an effective TDM strategy and can potentially lower the cost of housing, and Walker recommends unbundling in the long-term. One of the major concerns expressed during the Core Community Voices outreach session and from respondents who took the Community Questionnaire is the issue of parking spilling over from residential uses onto residential streets. If parking is required to be unbundled, instead of paying for parking on-site, a resident may choose to park on the street where parking is free. Walker recommends unbundling when LA County implements a pilot parking permit programs in areas with multifamily development.

2f. Implement parking maximums

Not recommended at this time

Some cities have implemented "parking maximums," which cap the number of parking spaces that can be provided at multifamily properties. Parking maximums are designed to limit the construction of parking facilities that are larger than necessary, thereby limiting the number of resources devoted to parking. Reducing the land devoted to parking increases the opportunity for more people-centric uses, including the development of housing. Since the cost of building parking spaces is often passed onto the resident, parking maximums can also reduce the cost of housing by limiting the amount of parking that can be built.

Parking maximum requirements are implemented to achieve a number of policy objectives, including to limit traffic by encouraging the use of other modes of transportation as well as preventing lender requirements from dictating the construction of parking spaces above what the maximum requirement has established.

Through Walker's outreach with developers, we learned that parking maximums can present challenges with obtaining financing on certain projects, especially if the maximum parking ratio is significantly lower than what a lender desires to finance. Imposing parking maximums may not promote the County's goal of increasing housing production, and is therefore, not recommended at this time.

Further, in an article he wrote for the American Planning Association, parking expert Donald Shoup, FAICP cites research conducted in London (which shifted from minimum parking requirements with no maximum requirement to maximum parking limits with no minimums) that concludes removing the parking minimum caused 98 percent of the reduction in parking spaces, while imposing the maximum caused only two percent of the reduction. Therefore, removing the parking minimum was far more impactful in achieving policy objectives than imposing a parking maximum requirement.

Future Considerations

The State of California is considering or has already passed legislation that can impact minimum parking requirements for California jurisdictions, including Los Angeles County. This section includes an overview of the key legislation.

AB 2097 (Friedman)

AB 2097 prohibits a public agency from imposing a minimum parking requirement on residential development if the development is located within one-half mile of public transit. Public transit means a major transit stop, which is defined as a site containing an existing rail transit, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a service frequency of 15 minutes or less during the morning and afternoon peak weekday commute periods and offering weekend service. Public transit also refers to a major transit stop that is included in an applicable regional transportation plan. The bill provides exceptions for local agencies to impose parking minims if the agency makes written findings establishing that removing parking minimums would have a "substantially negative impact" on the jurisdictions' ability to meet its state-mandated affordable housing obligations.

State Density Bonus Law

The State Density Bonus Law limits the minimum parking requirements for Affordable housing developments that offer units at a certain level of affordability within one-half mile of a major transit stop. The minimum parking requirements limitations varies based on the level of affordability of the units provided, project type, and proximity to transit. Any changes to that law will have impacts on minimum parking requirements for Affordable housing development projects.