Potential Displacement and Densification of Homeless Communities Due to Amended LAMC 41.18(d)

Louis Abramson, PhD

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Summary

Using public data, I study the impact on street dwelling of 500 ft exclusion zones around schools, parks, and daycares proposed as amendments to LAMC 41.18(d). Such an ordinance would:

- Proscribe 38% of sidewalk miles (4 out of 10 blocks), displacing up to 12,400 people—46% of unsheltered Angelenos. This is higher than the *LA Times*' 26% restricted area estimate;
- At least double the average number of unsheltered people per remaining sidewalk mile in CDs 1, 9, and 13 through said displacement to roughly one person every 250 ft;
- Place over 11,000 unsheltered Angelenos in regions where at least 50% of sidewalks are off limits, and 3,400 in regions where at least 75% are unavailable for dwelling.

Given these consequences—which neglect the effects of 10 ft entranceway restrictions a recent analysis found also to be significant—the need for and size of the proposed 41.18(d) buffer zones should be rigorously scrutinized with the aim of minimizing or eliminating them. Data from public health and safety sources should be used to motivate the geometry of any that remain. Finally, robust plans to ensure post-displacement contact with caseworkers and mitigate the harmful effects of densification should be in place before further action is taken.



The 2019 LAHSA unsheltered count map in Hollywood with 41.18(d) proscriptions overlaid. Nearly 40% of LA's sidewalk miles will be off limits, but some regions with already high homeless densities will lose even more of their streets. The reduction in available dwelling space will lead to significant displacement and densification with potentially harmful consequences to casework and public health. Further action should be predicated on an understanding of these effects and aimed at ameliorating them.

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Abstract

The Los Angeles City Council Committee on Poverty and Homelessness recently approved a proposal to bring LAMC 41.18 into agreement with federal case law. Part of this effort included limiting clause 41.18(d) to restrict people from sitting or sleeping in specific areas as opposed to the city at large. Using public data, I find that these restrictions may displace up to 12,400 people—46% of unsheltered Angelenos experiencing homelessness—relative to today's baseline where no such regulations are enforced. Furthermore, they may increase the number of unsheltered people per linear street mile by an average of 62%. CDs 1, 13, and 14 are most dramatically affected by the proposed changes, with unsheltered densities rising by almost 150% in CD1 and perhaps 2,000 people at risk of displacement in CD14. At a finegrained level, nearly 3,400 people live in census tracts where at least 75% of sidewalks will be proscribed. These substantial human implications-and the resultant case work and public health challenges—stem only from the proposed 500 ft restrictions around schools, daycares, and parks. Given the potential impact of this subset of restrictions, the need for and size of the above boundary definitions should be rigorously studied with the aim of minimizing or eliminating them. Robust plans to mitigate foreseeable harmful effects should also be drafted before final action is taken.

1 Context

LAMC 41.18 currently prohibits people from sitting or sleeping on any sidewalk in the City of Los Angeles. In 2006, the Ninth Circuit Court of Appeals made this law unenforceable in *Jones v. Los Angeles*.¹ This year, the same court ruled a similar law unconstitutional in *Martin v. Boise*.² The City must therefore either repeal LAMC 41.18 or amend it to conform to federal precedent. As

¹https://caselaw.findlaw.com/us-9th-circuit/1490887.html

²https://caselaw.findlaw.com/us-9th-circuit/1904309.html

of this writing, presumably in an effort to balance the needs and desires of housed and unhoused Angelenos, the City Council has chosen to amend the law.³

The bulk of the proposed amendments—LAMC 41.18(d)—comprise a set of restrictions on where unsheltered people may dwell. Among other things, this section states that "No person shall sit, lie or sleep in or upon any street, sidewalk, or other public right-of-way":

- (1) At any time in a manner that restricts ten feet of clearance from any utilizable and operational entrance, exit, driveway or loading dock.
 - •••
- (3) At any time:
 - (i) Within 500 feet of a park. [Emphasis mine.]
 - (ii) Within 500 feet of a school. [Emphasis mine.]
 - (iii) Within 500 feet of a daycare center. [Emphasis mine.]
 - (iv) In or upon any tunnel, bridge or pedestrian subway that is on a route designated by City Council resolution as a school route.
 - (v) Within 500 feet of a facility opened after January 1, 2018 to provide housing, shelter, supportive services, safe parking, or storage to homeless persons.

There are valid sociological arguments that the above restrictions substantially criminalize homelessness, amount to a kind of segregation, feed negative and inaccurate stereotypes of people experiencing homelessness, distract from the critical problem of building housing, and are fundamentally unenforceable.⁴ There are also legitimate concerns that other sections of the ordinance (not reproduced) are overly vague, opening the door to abuse.

Whatever one's stance on these issues, it benefits any discussion of this or other laws to start from the facts: without a realistic assessment of the human impact of 41.18, we cannot proceed to optimize or eliminate the ordinance to bring our statutes in-line with our values. This document is intended to provide such an assessment, and so aid this endeavor.

I will focus on the bolded clauses above: 41.18(d)(3)(i) through (iii)—hereafter "41.18(d)." I limit my analysis simply because these items are readily amenable to quantitative study using public data. I touch on potential ramifications of 41.18(d)(1), (3)(iv), and (3)(v) in Section 4, but I believe the effects of these three 500 ft restrictions are enough to warrant significant concern, if not a rethinking of the boundaries themselves.

I proceed as follows: Section 2 outlines my analyses and the data on which they are based; Section 3 summarizes my results; Section 4 motivates and presents six recommendations for action based on my findings, and explores caveats.

³Council File 19-0602-S1; http://clkrep.lacity.org/onlinedocs/2019/19-0602-S1_rpt_hp_8-21-19unsigned.pdf. ⁴e.g., https://twitter.com/EveryoneIn_LA/status/1169031003282780161?s=20.

2 Methodology

I have two aims: (1) find a proxy for the amount of space 41.18(d) would render off-limits to people experiencing homelessness; (2) estimate the number of such people thereby affected.

There are multiple ways to estimate the amount of real estate 41.18(d) could proscribe. The simplest is to assume all of the city's ~1000 public schools,⁵ ~1000 daycares,⁶ and 270 parks⁷ are infinitesimal points. The fraction of area affected by 41.18(d) is then the total area of N, 500 ft-radius circles, where N = 2270 is the number of such objects (which neglects private schools). Dividing this area—about 64 sq. mi—by LA's total non-park land area—421 sq. mi⁸—yields a conservative estimate of the restricted space of about 15%. A more rigorous version of this calculation by *The LA Times* finds 26%.⁹

However, beyond underestimating the impact of schools, etc.—which are not points (as *The Times* recognized)—and neglecting the fact that built structures, roads, and private property render much of LA's land unavailable to unhoused people, that kind of approach assumes Angelenos experiencing homelessness are distributed over areas as opposed to *along streets*. This point is important because streets can be wound into very different lengths within the same area. At a fixed number of people per street mile, this means that very different fractions of the population can be affected by the same areal restriction depending on the number and configuration of the intersecting streets.¹⁰ As such, a better estimate of a restriction's impact is the *length* of sidewalk it proscribes, not the area of the buffer zones. I adopt this assumption below.

In this case, the best proxy for 41.18(d) is LAMC 85.02, an ordinance which currently prohibits dwelling in a vehicle at any time also within 500 ft of a school, park, or daycare. Maps of affected streets are publicly available at https://geohub.lacity.org,¹¹ which also provides a breakdown of the 2019 Los Angeles Homeless Services Authority (LAHSA) homeless count at the census tract level.¹² These two datasets are sufficient to estimate both the amount of space and the number of people potentially affected by 41.18(d), and I base all that follows exclusively on them.

To assess the fraction of restricted street miles, I first filtered the 85.02 map to only those streets permanently off limits to vehicular dwelling. These are highlighted in red in Figure 1. I then used

⁵https://geohub.lacity.org/datasets/70baf6da243e40298ba9246e9a67409b_0 suggests 1213, which I discount as LAUSD extends beyond LA City.

⁷https://www.laparks.org/parks.

⁸https://www.tpl.org/sites/default/files/files_upload/CityParkFacts_2017.4_7_17.FIN_.LO_.pdf.

⁹September 9, 2019; https://www.latimes.com/projects/homeless-sleeping-maps/

⁶https://childcarecenter.us/county/los_angeles_ca suggests 2929, which equates to 1171 when weighted by LA City's share of LA County's population (assumed 40%).

¹⁰Imagine a region 1 mi wide and 1 mi long with a street running its length and another running its width intersecting at its center. This space has $2 \times (1+1) = 4$ mi of linear real estate available for living—either side of two, 1 mi long streets. If a half-mile wide restriction were placed at the center of this space running its full length, $2 \times (0.5+1) = 3$ mi of sidewalk would become proscribed, and $0.5 \times 1 = 0.5$ sq. mi of area. This restriction would rule-out 75% of the streets, but only 50% of the land area. Adding more streets inside the proposed restricted zone would rule-out ever-higher fractions of livable sidewalk without increasing the areal impact at all.

¹¹https://lahubcom.maps.arcgis.com/home/item.html?id=ef425926c6d64c6da637ccd7fd70c455

¹²https://lahubcom.maps.arcgis.com/home/item.html?id=2e970263e06d4ea2a0c5c4c97d2a3ded



Figure 1: An overlay of LAMC 85.02 restrictions on a heat map of the 2019 LAHSA unsheltered count in Central Hollywood census tracts. Red lines denote *No Vehicle Dwelling Anytime*, corresponding to streets within 500 ft of schools, parks, and daycares. The fraction of such streets—which 41.18(d) would also proscribe—can approach 100% in some tracts. The proposed ordinance would be highly disruptive in all such areas with a high density of unsheltered people (darker background colors).

the "Summarize Within" tool in geohub's "Analysis \rightarrow Summarize Data" package to sum the total length of these restricted streets (in miles) in each of the 1004 LA City census tracts in the LAHSA dataset. I repeated this procedure with the full 85.02 map (all colors in Figure 1) to obtain an estimate of the total street length within each tract. I then matched these datasets to create a final table with the total and restricted street lengths, and LAHSA counts in each tract.

I find LA's total street length to be 6,776 mi, within 4% of the Bureau of Street Services quoted 6,500 mi.¹³ Similarly, I find the total length of 85.02-restricted streets to be 2,601 mi. These results suggest that 41.18(d) may prohibit living on 38% of LA's streets, roughly 4 out of every 10 blocks.

To estimate the number of people this restriction might affect, I limited my analysis to unsheltered individuals, assuming they were at highest risk of displacement by any regulations on street life. While not affected by sleeping prohibitions, the sheltered population may be affected by daytime constraints, suggesting the results in the next section are conservative.

As of January 2019, the City of LA had a total unsheltered population of 27,221 people.¹⁴ The sum of the unsheltered counts from the geohub dataset is 26,605 people, suggesting that uncertainties in apportioning the LAHSA count to each census tract are roughly 2% in the aggregate. Assuming these are distributed normally among Council Districts (CDs), this would imply up to

¹³https://streetsla.lacity.org/what-we-do

¹⁴https://www.lahsa.org/documents?id=3421-2019-greater-los-angeles-homeless-count-city-of-los-angeles.pdf



Figure 2: The fraction of each CD's total street mileage affected by 41.18(d)'s 500 ft school, park, and daycare restrictions is shown by the grey bars. No CD has less than 25% of its streets proscribed, and two have over 50%. The number of unsheltered individuals in each CD as of January, 2019 is printed in each bar.

9% uncertainties on a CD-by-CD basis. Such errors are small compared to the effects discussed below, but they are larger than simple CD-level counting errors ($\leq 5\%$) and so are taken as uncertainties where appropriate. Figure 2, shows the fraction of street mileage in each CD estimated to be proscribed by 41.18(d), as well as their unsheltered population counts.

3 Results

Figure 2 suggests that 41.18(d) will render between 25% (CD3) and 60% (CD1) of a CD's sidewalks off limits to unhoused Angelenos at all times, with half of CDs losing more than 40%. These already substantial fractions become more concerning once weighted by each district's unsheltered population. Figure 3 shows those statistics, which account for the fact that not all parts of a district have the same share of people experiencing homelessness.¹⁵

Assuming that unsheltered individuals are evenly distributed within a census tract (see Section 4), as many as 12,391 total individuals—almost half of the city's total unsheltered population—are at risk of displacement. This corresponds to up to 2,000 people in a single CD, over 1,000 individuals in five CDs, over 590 people in half of CDs, and never less than 160 people in any CD. Such numbers clearly suggest that substantial outreach efforts will be necessary to ensure an orderly and humane roll-out of 41.18 as currently proposed.

At the finest-grained level available, about 11,300 unsheltered Angelenos live in census tracts where at least half of all sidewalks will become off-limits. Nearly 3,400 people live in tracts where at least 75% will be proscribed. Table 1 presents more details.

 $^{{}^{15}\}sum_{i=1}^{N_{\text{tracts}}} (L_{\text{restr}}/L_{\text{tot}})_i N_{\text{unshelt},i}$ over all tracts in a CD, where $L_{\text{restr}}/L_{\text{tot}}$ are the *i*-th tract's restricted/total street lengths, and N_{unshelt} is its LAHSA unsheltered count.

Table 1: Census Tract-level Unsheltered Population by Restricted Street Fraction

Percentage of tract sidewalks off-limits	\leq 5%	$\leq 25\%$	$\geq 50\%$	\geq 75%	$\geq 95\%$
Percentage of unsheltered residents in such tracts	2.7%	18.7%	42.5%	12.7%	2.7%
Number of unsheltered residents in such tracts	708	4,989	11,317	3,380	726

LA's unsheltered population in census tracts with a given fraction of sidewalk miles proscribed by 41.18(d). Over 700 people live in places where less than 5% of sidewalk space would be available for dwelling.



Figure 3: *Left:* Citywide, 41.18(d) puts almost 12,400 unsheltered people at risk of displacement. Five CDs could see over 1,000 disrupted lives; no CD would see less than 160. This presents serious outreach and enforcement challenges to each Councilmember. *Right:* unsheltered densities may rise by at least 30% in all CDs, with CDs 1 and 9 seeing \geq 100% increases, and the city seeing a ~60% increase on the whole. Four CDs would see streets crowd to one unsheltered person every 250 ft on average (linear densities printed on bars). Since public health and safety issues might be sensitive to interactions between people, those rates may rise as the density *squared*, suggesting $3-6\times$ increases in some places.

In terms of where displaced people will go, the right panel of Figure 3 shows the increase in density of unsheltered homeless people (per linear street mi) as a percentage over a baseline where 100% of streets are available for living (likely generous) and there is no increase in homelessness relative to 2019 (likely conservative).¹⁶ It is possible that every CD will see at least a 30% increase in local unsheltered densities after 41.18(d) is enacted, with CDs 1 and 9 seeing over 100%. The absolute densities can remain modest (see labels at *right*), but in CDs 1, 9, 13, and 14, the average

 $^{^{16}1/(1-}f_{\text{restr}})-1$, where f_{restr} are the bar heights in Figure 2. I assume people will stay within their CD.

spacing between people experiencing homelessness would be less than 280 ft. Globally, these figures imply a city-wide increase in homeless street density of about 62%, or one unsheltered Angeleno for every 825 ft of road (vs. about 1340 ft, today).

While striking on their own, the implications for public health and safety may be greater: naively, interactions between people would increase as the density squared. If so, whatever phenomena depend on such interactions could rise by $3-6\times$ given the above estimates.

4 Recommendations and Discussion

4.1 **Recommendations**

The following sections detail a number of harmful effects 41.18(d) might have on thousands of Angelenos. *These will be minimized if 41.18(d)'s exclusions are minimized*. I therefore recommend:

- 1. The Committee should consider reducing the 500 ft exclusion zones and removing those that are not motivated by data. The buffers should be designed to minimize impact on unsheltered Angelenos, and so be as compact as possible to accomplish a given purpose. Once that purpose is identified, evidence from, e.g., public health and public safety sources should be used to determine the smallest appropriate boundary, if one is necessary at all.
- 2. The Committee should consult the County Public Health Department or an appropriate City body to assess the consequences of any densification of unsheltered populations due to 41.18(d). Strategies to mitigate harm should be in place prior to promulgation.
- 3. The City should assess the fraction of sidewalks proscribed by 10 ft entrance/driveway restrictions in areas of high unsheltered density. These begin to rule-out substantial amounts of street length where the average spacing between such objects approaches 20 ft.
- 4. The City should study the detailed distribution of unsheltered people in areas with good mixes of LAMC 85.02-restricted and unrestricted streets to determine if there is clustering around proposed exclusion zones.
- 5. The City should assess the number of bridges, tunnels, and subways on school routes and begin consistent outreach to those communities well in advance of enacting the new ordinance.
- 6. The Committee should ensure robust plans are in place to help affected Angelenos relocate and maintain continuity of contact with their case workers/service providers. Strategies for combating the negative effects of moving people farther from sanitary facilities should also be implemented, or the buffer zones around parks should be removed.

I motivate these recommendations below assuming 41.18(d) will stay as currently drafted.

4.2 Minimum/Maximum Displacement Estimates and Caveats

My best estimate based on projected off-limit streets and the most recent census tract level LAHSA statistics suggests that 38% of LA's sidewalks will be made unavailable to our homeless population. Assuming that all streets are equally likely to be populated, this implies a potential displacement of about 12,400 individuals, with no CD having fewer than 160 displaced persons.

Lower, almost certainly less accurate estimates derive from the simple fraction of LA's area within 500 ft of schools, daycares, and parks mentioned in Section 2. At 15%, this implies about 4,100 people at risk of displacement. Considering only LAUSD schools in tracts with at least 10 unsheltered people, the restrictions imply a minimum of 8% affected area, or about 2,200 people.

Hence, no fewer than 2,000 people are at risk of displacement by the proposed 41.18(d) amendments, with the actual number likely 5 to 6 times higher. In all cases, the impact would disrupt a large number of lives, and all subsequent action should be taken with this in mind (*Recommendation 1*).

The following are factors I neglected that would tend to increase the above estimates:

- Driveways. LAMC 41.18(a) and (d)(1) prohibit people from dwelling on sidewalks within ten feet of "operational entrance[s], exit[s], driveway[s] or loading dock[s]." This proscription seems reasonable from a safety perspective, but would exclude 20% of sidewalk length even at a generous driveway spacing of 100 ft. As a recent study of Echo Park has found,¹⁷ this restriction may significantly further densify unsheltered communities in crowded areas, or displace significant people in places where close to 100% of the sidewalk is so proscribed. If competition to stay in the remaining space leads to conflict, this restriction may prove counterproductive (*Recommendation 3*).
- Bridges, tunnels, and pedestrian subways on school routes. These remove a negligible fraction of sidewalks, but highway underpasses can be home to robust communities of unsheltered people. If any of these happen to be along school routes, this clause would also cause significant additional displacement/disruption (*Recommendation 5*).
- 3. *New housing facilities, e.g., Bridge Homes.* 41.18(d)(3)(v)'s 500 ft restrictions around these sites are meant to curb encampment growth near supportive housing. Today, there are too few of these projects to proscribe a meaningful a number of streets. However, as many more facilities open, their footprints may become significant. If the supply of such housing does not meet demand—a depressing but plausible situation—it may further densify or displace unsheltered Angelenos even as it brings some of that community indoors.

Lastly, my assumption that all streets are intrinsically equally likely to be home to unsheltered people could bias the above estimates either way: If unsheltered Angelenos already avoid streets within 500 ft of schools, daycares, and parks, then my estimates are too high. If they tend to cluster within those limits—e.g., because of enhanced access to park restrooms—then they are too low.

¹⁷https://www.latimes.com/california/story/2019-09-16/homeless-sidewalk-sleeping-los-angeles-map.



Figure 4: A ZIMAS map of Central Hollywood (left) showing the Neighborhood Council in blue and 41.18(d)'s 500 ft exclusions zones around schools/parks/daycares in yellow (http://zimas.lacity.org/). A foot survey of this district's seven census tracts found the fraction of unsheltered people dwelling in the yellow zones to be consistent with the fraction of street miles they cover (right; grey dashes show the 1-to-1 line). This suggests that the assumptions behind Section 3's results are fair. More surveys are needed to confirm this and enhance estimates of 41.18(d)'s effects. (Point colors at denote census tracts; unsheltered counts on restricted/unrestricted sidewalks are listed in the legend. See Footnote 18 for walking survey details.)

To get a sense of this potential bias, I performed a walking survey of the seven census tracts within the jurisdiction of the Central Hollywood Neighborhood Council (Figure 4, *left*).¹⁸ These tracts contain 32.4 mi of streets, 16.2 mi of which would be 41.18(d)-proscribed. If unsheltered people were equally likely to inhabit any street at the neighborhood level, 50% should therefore be in restricted zones. Indeed, I found $54\% \pm 8\%$ —86 out of 158 unsheltered people (Poisson errors)—sitting, sleeping, or lying on off-limit streets, suggesting no significant bias is present.

This statement holds at the individual tract level, albeit with substantial uncertainties: Figure 4, *right*, shows that the fraction of unsheltered people seen living on restricted streets is consistent with the restricted street fraction in that tract. While better surveys in more neighborhoods are clearly needed to flesh-out and generalize this finding (*Recommendation 4*), to the extent that I can assess them, the assumptions behind my results seem fair.

¹⁸Tracts 190100, 190700, 190801, 190802, 191810, 191820, and 191901. Survey conducted on 1–8 September 2019 from roughly noon to 2 pm. I walked every major E/W thoroughfare and some N/S ones for a total of 22.8 total mi. I visually inspected non-walked streets as I passed, counting individuals, vehicles appearing as dwellings, and tents. Adding unsheltered people on foot (59), my estimates capture about 40% of the 2019 LAHSA Count, but, given the informal nature of my survey, differences in the time of day, and the fact that I did not inspect tents or vehicles for their number of occupants, I am not confident that this offset is meaningful.

4.3 Higher-level Concerns

Restrictions like 41.18(d) can displace or densify communities: as space for people experiencing homelessness is removed, they may move to new locations or crowd the remaining space. I studied the latter quantitatively, and—in regions where the number of unsheltered people per mile of sidewalk is already high—public health concerns may arise. As mentioned, some regions might experience a doubling of unsheltered density. Assuming the spread of illness is sensitive to this, 41.18(d)'s public health consequences must be understood before further action is taken (*Recommendation 2*).

Regarding displacement, while it may partially ameliorate densification and so some health concerns, it introduces others that warrant serious forethought. For example, moving people 500 ft away from parks may move them 500 ft away from their principal sanitary facility—the park restroom. For people with limited mobility, this may lead to deleterious personal and public health consequences (*Recommendation 6*). Another example is the dispersion of tight-knit communities now dwelling under overpasses that happen to be on school routes. Breaking apart these communities—which can have robust social infrastructures—may cause psychological and material damage to their former residents and delay their progress to housing (*Recommendation 5*).

More generally, any displacement removes unsheltered people from the places in which their case workers are used to finding them. Such situations may cause disruptions in service provision and again set back people's progress to housing (*Recommendation* 6).

In all cases, the details of an ordinance like LAMC 41.18 as currently proposed clearly have serious potential human impacts and therefore deserve serious study. When the lives of thousands of Angelenos will be affected, the City Council should take all possible action to minimize harm. The resources necessary to ensure that this ordinance is humanely enacted and enforced should be in place with clear, widely known, well understood, and *well motivated* guidelines publicized well before the law goes into effect. Absent such preparation, it seems irresponsible to promulgate such an ordinance. I hope the Council finds this document helpful in its efforts to avoid that outcome.