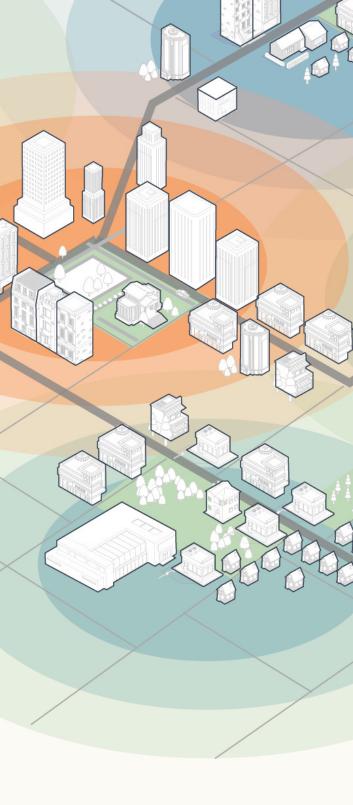
THE **20-MINUTE SUBURB** A PLANNING FRAMEWORK FOR CONNECTE COMMUNITIES





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EXECUTIVE SUMMARY

The distinctive built fabric of American suburbs has largely depended on car travel and single-use zoning for decades. In the process, this pattern of development has increased sprawl, exacerbated our carbon footprint, and heightened segregation within communities.

As the global COVID-19 pandemic continues to shape migration patterns, and suburbs face new pressures and demands from their changing populations, this report proposes a framework for a "20-minute suburb" designed to retrofit suburbs into places where residents can meet all of their daily needs within a 20-minute walk.

In order to re-envision our suburbs as more affordable, interconnected, accessible, and equitable places to live, this framework provides:

- A brief history of the development of American suburbs and the lasting impact of this legacy
- Emerging demographic trends within suburban populations, particularly through the lens of the pandemic
- Ongoing reform and policy measures that enable better design and planning decisions

 Site-specific design interventions to guide suburban municipalities across three typologies: mixed-income residential suburbs, suburban periphery/underserved communities, and local town centers

A summary of our recommended design guidelines is indicated to the right and explained further in the following chapters. Transforming American suburbs is a long-range effort that will require consensusbuilding and participation from many stakeholders; we have created this report as a resource for planners, policymakers, elected officials, and community leaders. We hope you find the 20-minute suburb a useful framework to begin thinking about how to improve amenity, density, and connectivity within your community.

Recommended Design Guidelines

Key Elements	15-Minute City Model	Current American Suburbs	20-Minute Suburb
Amenity	Provide 6 essential functions: Living, Working, Commerce, Healthcare, Education, and Entertainment	75% of the urbanized area in U.S. cities is zoned for residential use only	Provide diverse and affordable housing options Provide neighborhood amenities and prioritize services for underserved communities
Density	N/A	1 - 8 DU / AC	Average 8 DU / AC
Connectivity	10-15 min walking or biking	Incomplete pedestrian and bike network	20-minutes walking or biking First and last mile travel solutions Multimodal network connections

INTRODUCTION

THE SUBURBS ARE CHANGING

Photo Credit: David Jay Zimmerman/Corbis Documentary/Getty Images

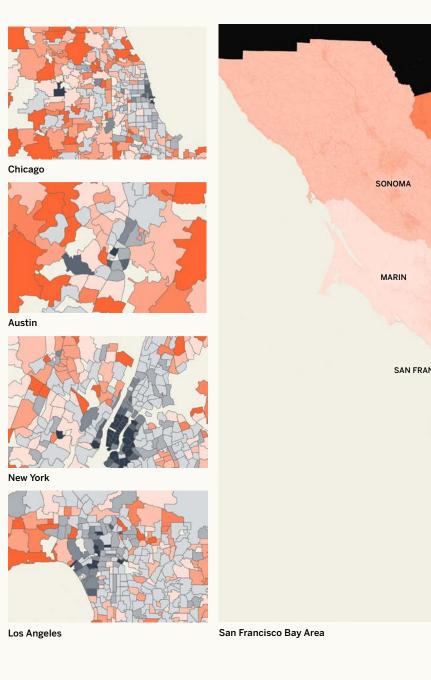


In many major urban areas across the US, the onset of the global pandemic has driven people to relocate from cities to the surrounding suburbs in search of affordability, space, and access to nature.

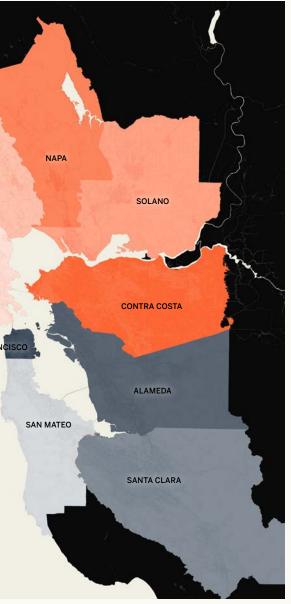
Notably, the increase in moves during 2020 was driven by young, affluent and highly educated urban dwellers—reports in late 2020 indicate 48% of millennials and 49% of Gen Z living in suburbs, up from 44% and 41%, respectively, in 2019.

This demographic is mobile and prone to relocating, especially in the context of an increasingly remote and hybrid work environment. A recent report that accounts for 2020 US Census data revealed an increase from 14% to 16% from 2019 to 2020 of residential moves, the first increase in over a decade.

Post-pandemic Moving Trends Net Population Change in 2020–2021







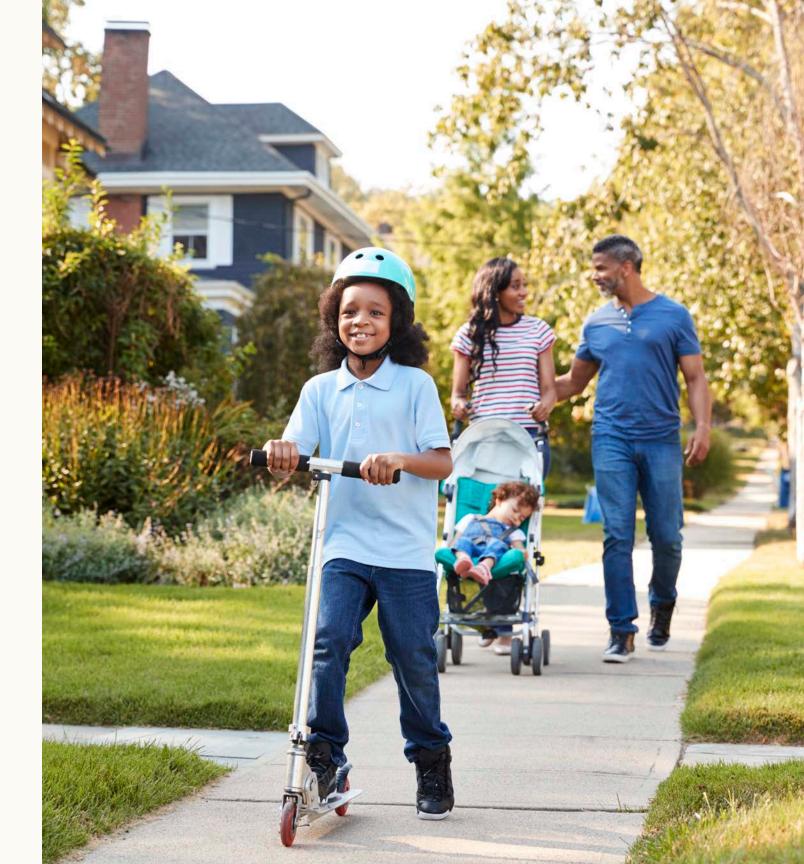


Many of these newcomers to suburban areas desire a level of multi-modal access to green space and amenities on par with the connectivity they experienced in urban settings, but is largely absent in most American suburbs.

As suburbs expand and their demographics shift, how can policymakers and planners establish frameworks for improving diversity, density, and connectivity, while preserving affordability and preventing displacement?

Taking a holistic view of these issues, our urban design and planning team posits a planning model that we have termed the "20-minute suburb."

Through careful and strategic interventions, we believe that existing suburban communities can be transformed to become places where residents can meet all of their daily needs within a 20-minute walk. This is a radical reinvention of a suburban planning model that has historically marginalized low-income communities and people of color—instead, we envision the 20-minute suburb as a framework for reconnecting communities and expanding economic and social mobility.





CONTEXT CHALLENGES

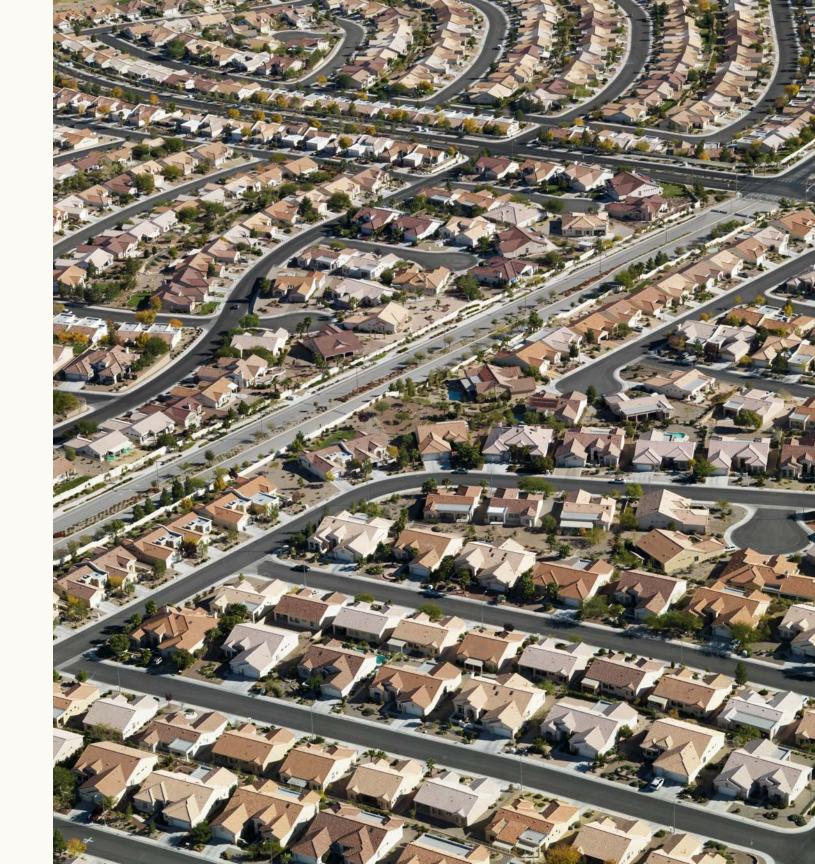
Photo Credit: George Rose/Getty Images



Initially, the expansion of American suburbs was <u>enabled by the extension</u> of street car rail lines beyond city limits, making daily commutes possible.

By the end of WWII, however, suburban populations grew exponentially as car ownership increased and federal infrastructure bills, such as the Highway Act of 1956, supported the construction of extensive highways throughout the country. During this time, cheap, mass-produced housing abounded, enabled by the standardization of household appliances and prefabrication of construction materials. This development model is perhaps best exemplified by Levittown, an early prototype for suburbia that promised a pathway to home-ownership for most white Americans. The passing of the G.I. Bill further guaranteed affordable housing with low down payments and interest rates for returning veterans.

By the 1960s, many Blacks were migrating from a segregated South to the north and west of the country in search of jobs and educational opportunities. These movements fueled racial tensions, and drove many white city-dwellers to the suburbs. The growth and corresponding segregation of the suburbs were enshrined by discriminatory zoning policies such as redlining, which prevented investment and lending within and near Black communities, and provisions that ensured development would largely remain zoned for single-family use.



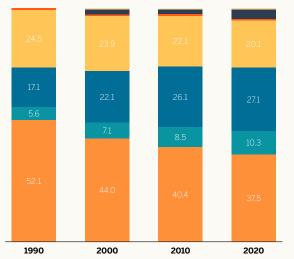
21ST CENTURY SUBURBS: CHANGING DEMOGRAPHICS. NEW CHALLENGES

In a notable shift from the white flight of the 1960s and 70s, a majority of contemporary suburban dwellers are people of color. In fact, most large suburbs often contain more diverse populations than the closest major metropolitan areas.

Data from the 2020 US Census reveals that more than 50% of white, Asian-American, Latino or Hispanic, and Black Americans now reside in the suburbs, and for the first time the majority of suburban dwellers under the age of 18 are people of color. While white suburban populations have remained consistent since 1990, the past thirty years have seen a distinct increase in suburban population for all other major race-ethnic groups.







21ST CENTURY SUBURBS: CHANGING DEMOGRAPHICS. NEW CHALLENGES

Present-day American suburbs are largely zoned for single-use and remain car-centric this pattern of development has inevitably led to a rising carbon footprint through increased energy use, pollution, and traffic congestion.

A study conducted by SOM in 2022 on decarbonizing communities in the San Francisco Bay Area and its outlying suburbs reveals a carbon footprint per service population (which accounts for both residents and commuters) in the Bay Area's outlying suburbs as much as three times larger than the city's downtown per capita footprint. As indicated in the chart to the right, the study compared six different areas from low-density residential to high density mixed use, and considered buildings, roadways, utilities, transportation and open space as part of its carbon calculations.

Carbon Footprint per Service Population



Low-Density Residential FAR up to 0.5 Service Population: up to 3,000

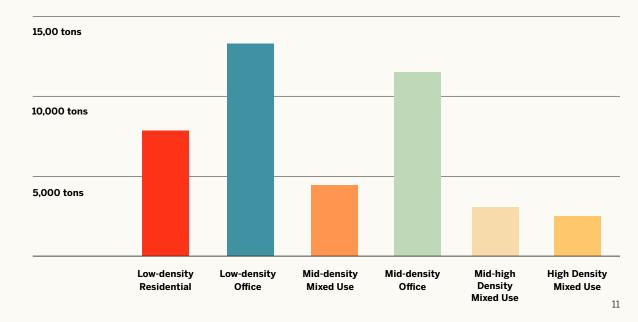
Low-Density Office FAR up to 0.5 Service Population: up to 2,000



Mid-Density Office FAR up to 1.0 Service Population: 2,000 - 5,000

Mid-High Density Mixed Use FAR up to 4.0 Service Population: 20,000- 40,000

Carbon Emissions per Capita (Service Population) San Francisco Bay Area, 2022







Mid-Density Mixed Use FAR up to 1.5 Service Population: 10,000- 20,000





High-Density Mixed Use FAR higher than 6.0 Service Population: 100,000 - 150,000

CENTURY SUBURB

: David Jay Zimmerr

While the socioeconomic diversity within suburbs has undoubtedly increased, affordability still remains a central obstacle for residents seeking alternatives to the rising cost of city living.

Approximately 75% of developed areas in the US remain zoned for residential use, limiting development to single-family homes or one unit per lot. Minimum parking requirements have further driven up the cost of housing construction, disincentivized affordable housing, and increased dependency on car travel. American households average more than one vehicle per household, and in many suburbs, bike lanes and sidewalks are few and far between or non-existent, severely limiting walkability and multi-modal access.

A lack of affordable housing policy in the suburbs and the legacy of exclusionary zoning has also increased the socioeconomic divides between cities and suburbs, and disproportionately limited low-income families' paths to home ownership.

In recent years, civic and government leaders have introduced policy initiatives to address these interconnected challenges to suburban development.

Our San Francisco-based planning studio began by looking at federal and local Californian precedents to better understand emerging trends and priorities to inform policy making in other contexts.

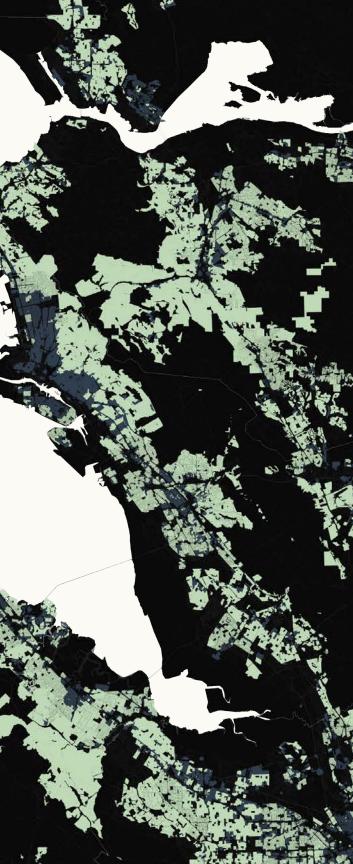
Passed in 2021, President Biden's Bipartisan Infrastructure Law calls for cities to limit single-family zoning and instead build more housing. The resulting \$5-billion Housing Supply Action Plan bestows grants and tax credits to local governments to eliminate exclusionary zoning rules. In the process, the program aims to bolster more equitable access to affordable housing. Enacted in 2022, the California Home Act Senate Bill 9 (SB 9) streamlines the process for a homeowner to create a duplex or subdivide an existing lot, with the goal of increasing housing density and affordability.

In San Jose, Opportunity Housing is the city's solution for enabling multi-unit housing on properties with a Residential Neighborhood General Plan land use designation, which generally covers single-family neighborhoods. These measures can improve access to housing and affordability by increasing the City's housing supply over time in response to housing shortages and lack of multi-use land.

San Francisco Bay Area Zoning Map

Single Family Residential Zoning

Other Residential Zoning



Across the country, accessory dwelling units (ADUs) have increasingly become viable solutions for increasing density in single-family-zoned areas, providing more accessible and affordable housing options in the process.

Los Angeles in particular has successfully championed ADUs; after statewide legislation went into effect, permits increased from 71 to 6,747 from 2014 to 2019. Statewide, California has seen an 11-fold increase in permit requests from 2017-2019. For moderate- and low-income homeowners, however, experts advise greater government involvement—whether in the form of loans, subsidies, easing regulatory requirements or streamlining the permitting process—to make ADU construction more affordable and accessible for all homeowners.



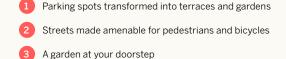


PRECEDENTS + BEST PRACTICES

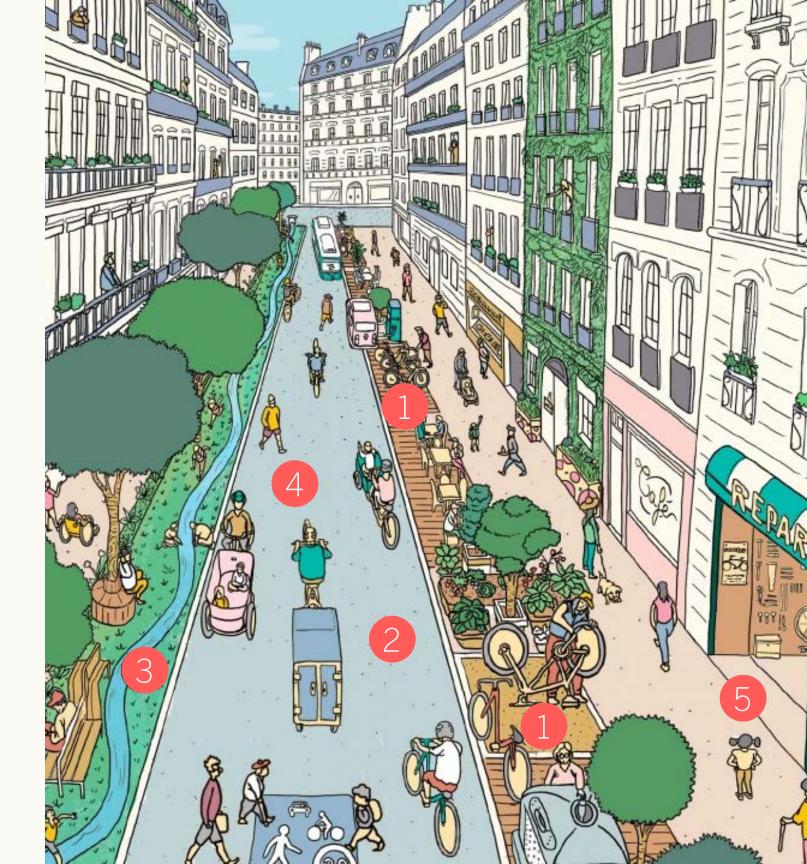
Photo Credit: Bim/Getty Imag

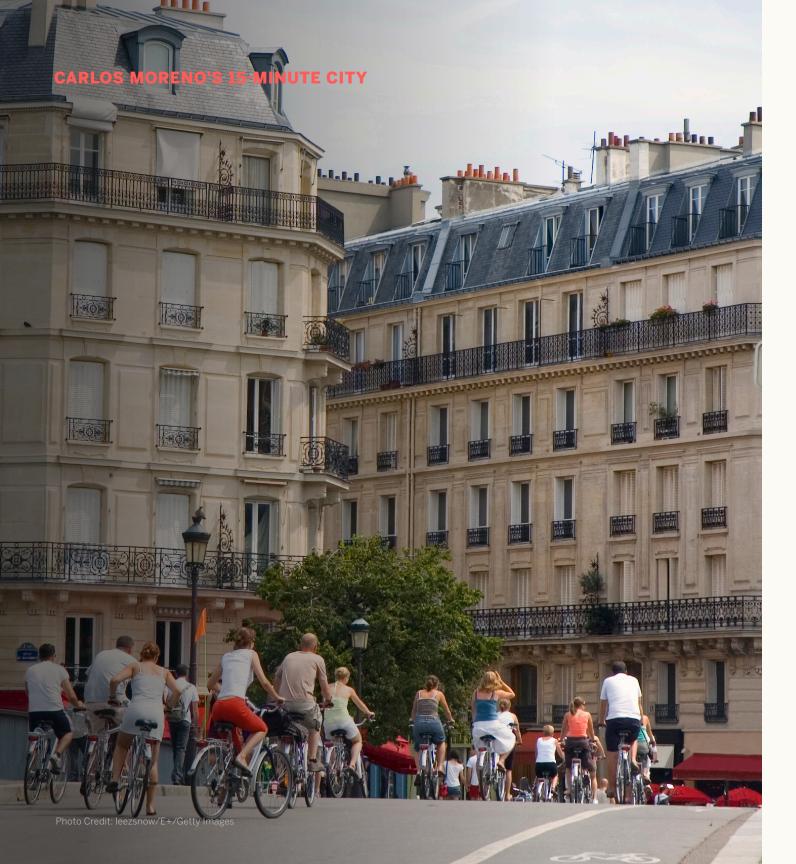


Our study builds upon urbanist Carlos Moreno's concept for a "15-minute city," in which decentralized city growth ideally connects residents to six essential functions: living, working, commerce, healthcare, education and entertainment, all within a 15-minute walking or cycling distance.



- 4 Safe journeys for children
- 5 More local services





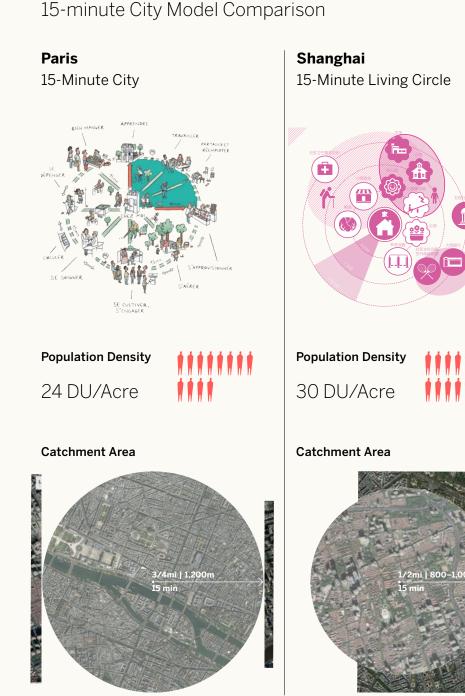
A successful 15-minute city further incorporates density, proximity, diversity and digitalization to improve connectivity and access for all residents within this framework.

Introduced by Moreno in 2016 and revised in 2021 in response to the urban challenges posed by the COVID-19 pandemic, the 15-minute city draws from seminal work by Jane Jacobs, Jan Gehl, Christopher Alexander and W.H. Whyte, among others, on the benefits of hyper-local community building, connectivity and proximity, and access to green space.

At this scale, as Moreno and his predecessors argue, development makes way for a more localized way of living. Other popular models of contemporary urban development similarly promote human-scaled urban design and the importance of networks and connectivity, such as New Urbanism, Smart Growth, Project for Public Spaces and the smart city movement.

The 15-minute city concept is <u>currently</u> <u>being deployed at different scales in cities</u> <u>around the world and has gained momentum</u> since 2020, when the C40 Cities Climate Leadership Group announced a 15-minute city pilot program for five global cities.

In Paris, the 15-minute city was a central component of the Mayor Anne Hidalgo's successful re-election campaign and the city is currently targeting bike lanes on every street by 2024 and converting over 70% of on-street parking for community-centered activities. Shanghai, grappling with higher population density, is envisioning a series of "living circles" at 5-, 10- and 15-minute scales to provide a range of services in both urban and suburban contexts. In Melbourne, a relatively smaller city compared to Shanghai and Paris, similar principles are being scaled to 20 minutes, with the goal of providing essential functions at the neighborhood level.



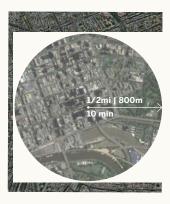
Melbourne 20-Minute Neighborhoods



Population Density

15 DU/Acre

Catchment Area

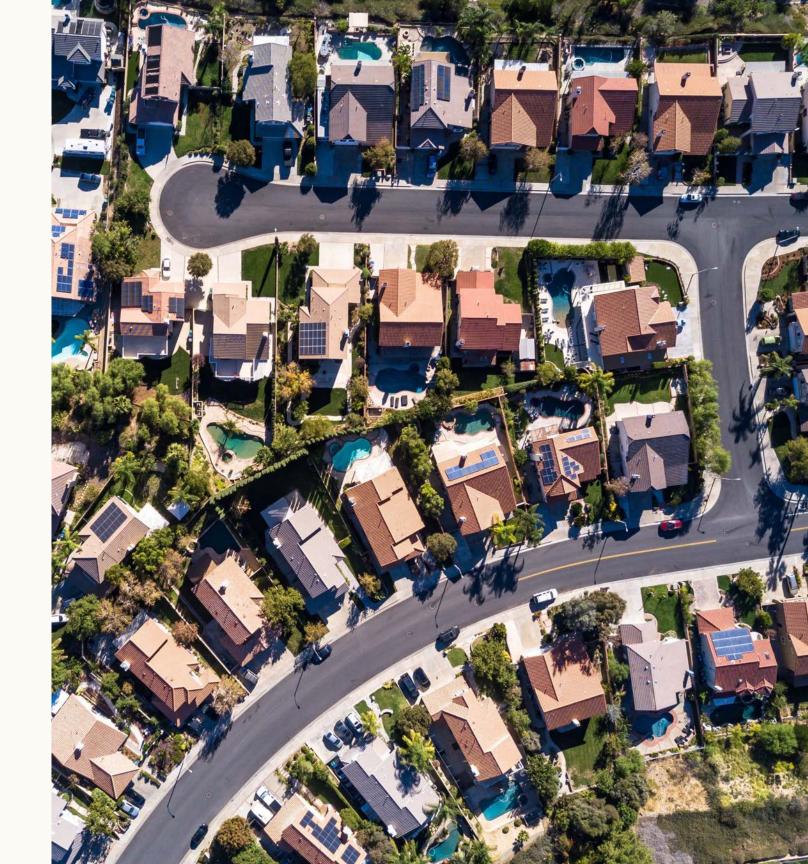






The 15-minute city model has seen global success, particularly in <u>urban contexts</u> that already experience high levels of density and can accommodate the required infrastructure and infill.

However, in the context of the American suburb, this model of development is incompatible with the scale of most suburban communities. Our vision for the 20-minute suburb considers the built fabric, zoning and legislative limitations and opportunities specific to the typical American suburb in order to deliver a scalable framework for retrofitting suburbia.

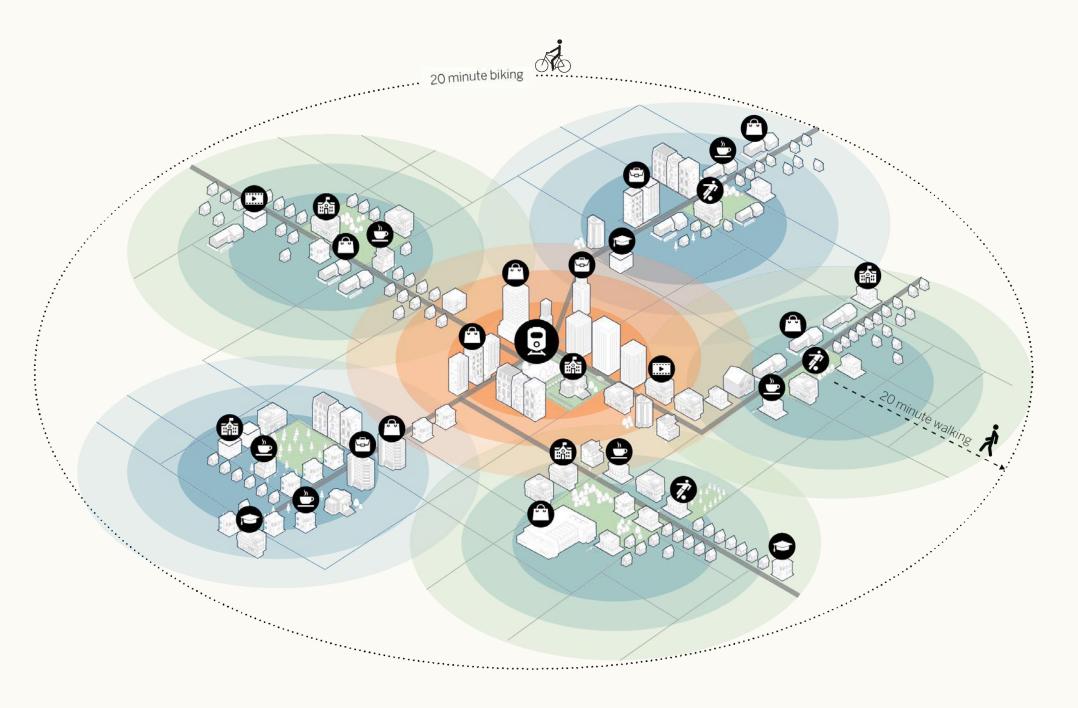


THE 20-MINUTE SUBURB

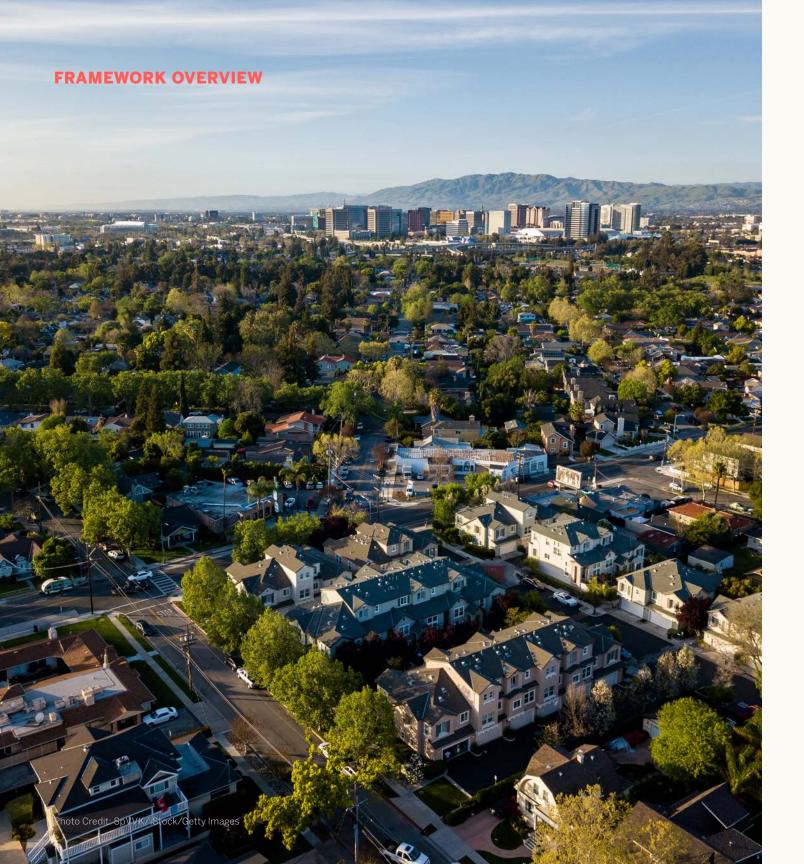
Photo Credit: Avi Wa



Our 20-minute suburb concept provides a sitespecific framework that existing suburban municipalities can use to guide future development.







In order to recommend high-priority services and interventions based on different socioeconomic contexts, we organize suburbs into three types:

- Suburban Periphery/Underserved \$ **Communities** These communities are sometimes characterized by economic or racial segregation. Service priorities should include diverse and affordable housing options, community facilities and programs to provide essential services. An emphasis on safe pedestrian and biking environments and improved public transportation options can better connect these communities to local town centers and corresponding job and educational opportunities.
- **Mixed-Income Residential** 5

Suburbs These communities should prioritize mixed-use commercial corridors. and diverse and affordable housing options to retain the diversity of the community. Strategies include converting vacant lots, retrofitting main streets with active ground

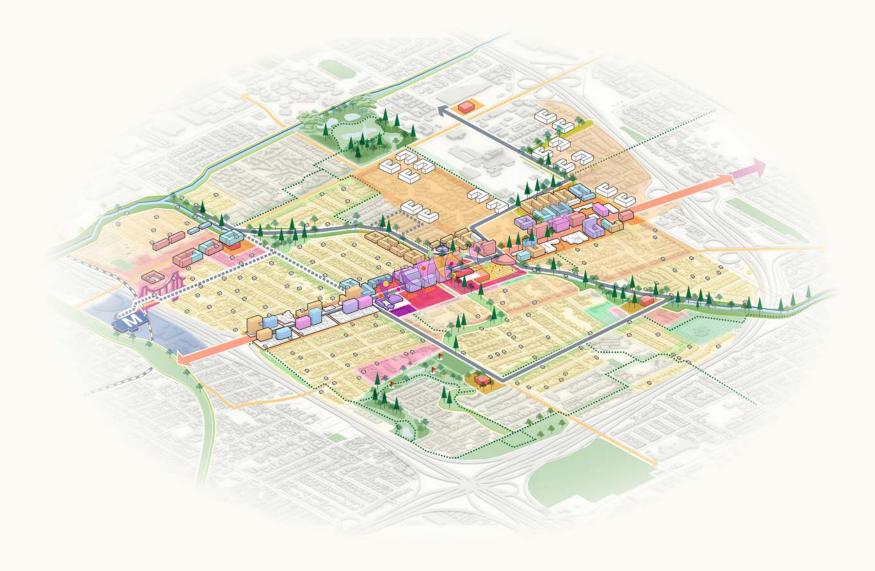
- \$

floor use, and prioritizing main street access to regional transit. An emphasis on creating safe open and recreational spaces can also preserve the age diversity within these communities.

Local Town Centers These mixed-use districts provide daily amenities. They should be connected to regional transit and within walking distance from residential neighborhoods. Priorities for future development should include creating and expanding local work hubs, distribution centers, and mixed-use high density. Since the pandemic, local town centers have become increasingly crucial destinations for daily amenities and work spaces, allowing residents to reduce commute times and travel between suburban and urban areas.

Within the context of each community type, <u>our framework proposes</u> <u>interventions according to three elements</u> critical to creating livable communities:

- **Amenity** A diverse array of functions should be available, enabling suburbs to accommodate and co-locate businesses, commercial and cultural spaces, housing, support services, and civic programs.
- **Density** New mixed-income housing, healthcare, education, and support services should be created at key locations to expand affordability and to create the density needed to support essential programs and functions.
- **Connectivity** Within a 20-minute walking distance, people should be able to fulfill all their daily needs. First and last mile travel must be provided, and bike and pedestrian networks should be integrated with existing transit infrastructure.



AMENITY

Increasing mixed-use development in the suburbs calls for a site-specific approach, as every community has different needs. While <u>some neighborhoods may</u> require significant affordable housing development, others may prioritize commercial space to revive downtowns and main streets.

During the pandemic, for instance, many restaurant streeteries and parklets were actively used in mixed-income residential suburbs. In suburban periphery/ underserved communities, however, these spaces did not cater to the immediate needs of the community and were not maintained.



We propose strategies for <u>increasing variety and a</u> <u>mix of uses</u> across these three suburban typologies.



SERVICE PRIORITIES

Diverse and affordable housing options Community facilities and programs Affordable and subsidized child care options

DEVELOPMENT STRATEGIES

Program and identify central, accessible locations to provide safe and essential services

SERVICE PRIORITIES

Main commercial mixed-use street Diverse and affordable housing options Recreation and open space

DEVELOPMENT STRATEGIES

Convert vacant lots to provide infill development

Retrofit main streets with active ground floor use

Prioritize main street access to regional transit

SERVICE PRIORITIES

Main commercial mixed-use stree Diverse and affordable housing of Recreation and open space

DEVELOPMENT STRATEGIES

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options	

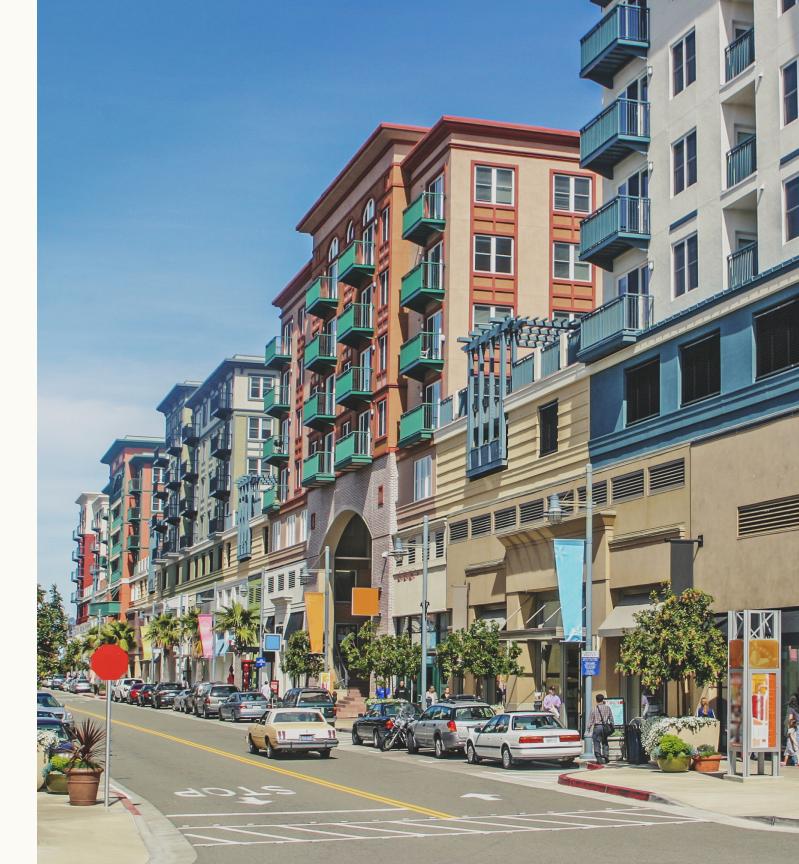
Convert vacant lots to provide infill development

Retrofit main streets with active ground floor use

Prioritize main street access to regional transit

DENSITY

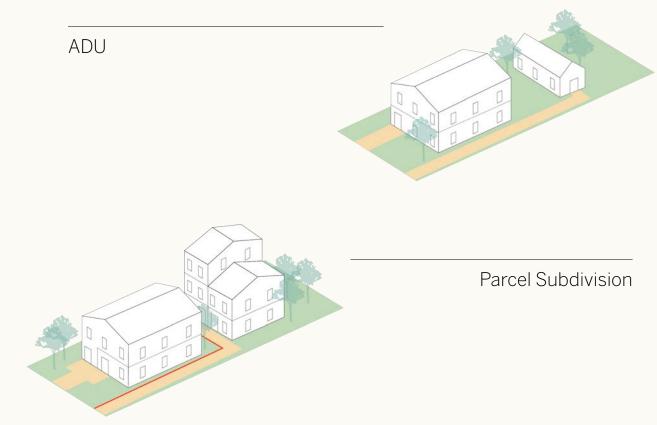
For the 20-minute suburb to work, <u>a typical</u> neighborhood should have an average of 8 dwelling units per acre (du/ac). In local town centers, where commercial services require a minimum population to be financially viable, this density increases to 15 du/ac.



DENSITY **DEVELOPMENT STRATEGIES**

Several strategies can be applied across all suburban typologies (suburban periphery/underserved community, mixed-income residential suburb, local town center) in order to increase density.

- ↔ Abolish exclusive/single-family zoning
- Implement flexible zoning to allow for multi-family housing
- ↔ Streamline ADU legislation
- ↔ Encourage parcel subdivision
- ↔ Increase height limits





CONNECTIVITY

Connectivity is the final piece of our framework, and an essential ingredient for realizing cohesive and safer suburban communities.

First and last mile travel—the distance between transit and your final destination—in particular should be prioritized, as well as bike and pedestrian infrastructure, improved street lighting and sidewalk safety. Within this transit ecosystem, transit options every two miles or less would be required in most suburbs to offset service gaps and support 15 to 20-minute walking distances.

However, expanding the catchment area to 20 minutes is not enough to service most suburban populations. An aerial view of the typical suburb reveals the impractical shape of American suburban built environments. Extensive culs-de-sac and dead-end roads limit connectivity between and within communities, which in turn artificially increases distances between destinations. These longer distances disincentivize active modes of travel, and ultimately increases the daily vehicle miles traveled.



CONNECTIVITY DEVELOPMENT STRATEGIES

Our recommendations for <u>improving</u> <u>connectivity and walkability</u> include:

- Neighborhood hubs (such as schools, main streets, civic or community centers) that double as local transit nodes and provide access to local town centers
- A minimum of two main pedestrian routes with dedicated bike lanes to the local town center
- A minimum five foot sidewalk width on main pedestrian routes
- First and last mile travel solutions where 20-minute walking catchments are unfeasible (e.g. scooters, on-demand transit service)
- Sidewalk lighting for pedestrian safety
- Trail connections between culs-de-sac and adjacent streets provided wherever possible to improve access for bicycles and pedestrians.





CONCLUSION

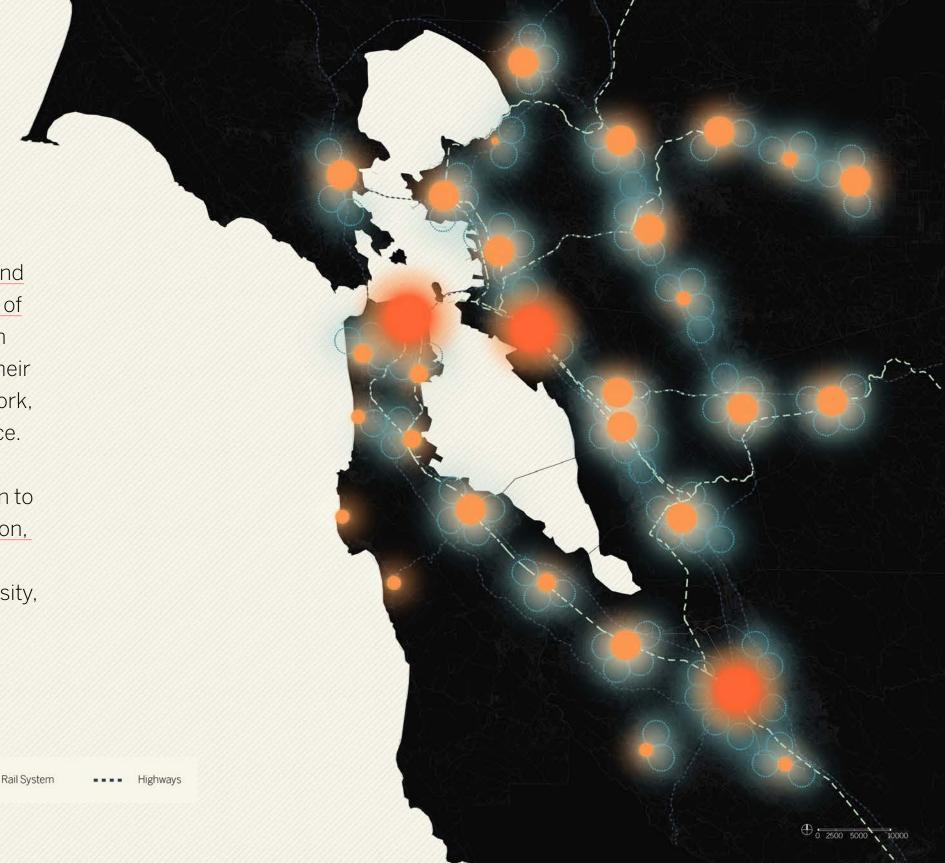
Photo Credit: Jandrie Lombard/Shuttersto



CONCLUSION

The 20-minute suburb framework has the potential to transform American suburbs into denser, more diverse and better connected communities within a broader network of suburban and urban development. In the process, we can design environments in which residents can meet all of their daily needs within a 20-minute walk-from school and work, to medical needs, shopping, food, or access to open space.

By reinventing the built form of our suburbs, we can begin to dismantle decades of segregation, displacement, exclusion, and carbon-intensive living in our built environment, and instead foreground a planning practice centered on diversity, connectivity, and equity.



Opportunity Areas of 20-minute Suburb

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