Does our solution lie in Tokyo? How Hawaii could ease its housing shortage by adopting or tweaking the housing policies of Tokyo

2022 Grassroot Institute of Hawaii seminars

Tobias Peter
Assistant Director and Director of Research, AEI Housing Center
(Tobias.Peter@aei.org)
About the American Enterprise Institute and the Housing Center

• Founded in 1938 as the American Economic Association in response to the New Deal.
• Non-partisan nonprofit located in Washington, DC.
• The American Enterprise Institute is a public policy think tank dedicated to defending human dignity, expanding human potential, and building a freer and safer world. The work of our scholars and staff advances ideas rooted in our belief in democracy, free enterprise, American strength and global leadership, solidarity with those at the periphery of our society, and a pluralistic, entrepreneurial culture.
• We receive funding from individuals, corporations, and grants.
• Three firewalls:
  • No money from the government
  • No paid research
  • Academic freedom
• The AEI Housing Center’s research transforms data into information, information into knowledge, and knowledge into policy action.

Disclosure: I have a financial interest in Places Platform LLC, which is interested in meeting housing supply shortages through walkable oriented development.
Hawaii has one of the highest housing costs in the country and world

- Out of the 50 states, Hawaii has
  - the highest median home price,
  - the 2nd highest median rents,
  - the 2nd highest rate of homelessness per capita, and
  - the 4th highest rate of net out-migration

- On a national basis, affordability in Honolulu and Kahului (based on median price-to-median income ratio) is very low, only surpassed by a few California metros.

- In a 2018 survey of 92 major international markets, Honolulu's affordability ranked 86th, just ahead of San Jose and right ahead of London, San Francisco and San Diego. Tokyo stands out at 60.

- Among the world’s largest cities in wealthy nations Tokyo is easily one of the most affordable. Why?

### 2018 Demographia International Housing Affordability

<table>
<thead>
<tr>
<th>Demographia Rank</th>
<th>Metropolitan Area</th>
<th>Price-to-Income Ratio</th>
<th>Nation</th>
</tr>
</thead>
<tbody>
<tr>
<td>92</td>
<td>Hong Kong</td>
<td>19.4</td>
<td>China</td>
</tr>
<tr>
<td>91</td>
<td>Sydney, NSW</td>
<td>12.9</td>
<td>Australia</td>
</tr>
<tr>
<td>90</td>
<td>Vancouver, BC</td>
<td>12.6</td>
<td>Canada</td>
</tr>
<tr>
<td>89</td>
<td>San Jose, CA</td>
<td>10.3</td>
<td>US</td>
</tr>
<tr>
<td>88</td>
<td>Melbourne, VIC</td>
<td>9.9</td>
<td>Australia</td>
</tr>
<tr>
<td>87</td>
<td>Los Angeles, CA</td>
<td>9.4</td>
<td>US</td>
</tr>
<tr>
<td><strong>86</strong></td>
<td><strong>Honolulu, HI</strong></td>
<td><strong>9.2</strong></td>
<td><strong>US</strong></td>
</tr>
<tr>
<td>85</td>
<td>San Francisco, CA</td>
<td>9.1</td>
<td>US</td>
</tr>
<tr>
<td>84</td>
<td>Auckland</td>
<td>8.8</td>
<td>Australia</td>
</tr>
<tr>
<td>83</td>
<td>London</td>
<td>8.5</td>
<td>UK</td>
</tr>
<tr>
<td>82</td>
<td>San Diego, CA</td>
<td>8.4</td>
<td>US</td>
</tr>
<tr>
<td>81</td>
<td>Toronto, ON</td>
<td>7.9</td>
<td>Canada</td>
</tr>
<tr>
<td>79</td>
<td>London Exurbs</td>
<td>6.9</td>
<td>UK</td>
</tr>
<tr>
<td>77</td>
<td>Adelaide, SA</td>
<td>6.6</td>
<td>Australia</td>
</tr>
<tr>
<td>76</td>
<td>Miam, FL</td>
<td>6.5</td>
<td>US</td>
</tr>
<tr>
<td>73</td>
<td>Seattle, WA</td>
<td>5.9</td>
<td>US</td>
</tr>
<tr>
<td>70</td>
<td>New York, NY-NJ-PA</td>
<td>5.7</td>
<td>US</td>
</tr>
<tr>
<td>69</td>
<td>Denver, CO</td>
<td>5.7</td>
<td>US</td>
</tr>
<tr>
<td>68</td>
<td>Portland, OR-WA</td>
<td>5.5</td>
<td>US</td>
</tr>
<tr>
<td>67</td>
<td>Boston, MA-NH</td>
<td>5.5</td>
<td>US</td>
</tr>
<tr>
<td>66</td>
<td>Sacramento, CA</td>
<td>5.3</td>
<td>US</td>
</tr>
<tr>
<td>61</td>
<td>Singapore</td>
<td>4.8</td>
<td>Singapore</td>
</tr>
<tr>
<td><strong>60</strong></td>
<td><strong>Tokyo-Yokohama</strong></td>
<td><strong>4.8</strong></td>
<td><strong>Japan</strong></td>
</tr>
<tr>
<td>59</td>
<td>Dublin</td>
<td>4.8</td>
<td>Ireland</td>
</tr>
<tr>
<td>58</td>
<td>Las Vegas, NV</td>
<td>4.7</td>
<td>US</td>
</tr>
<tr>
<td>57</td>
<td>Orlando, FL</td>
<td>4.6</td>
<td>US</td>
</tr>
<tr>
<td>48</td>
<td>Tuscon, AZ</td>
<td>4.3</td>
<td>US</td>
</tr>
<tr>
<td>47</td>
<td>Tampa-St.Petersburg, FL</td>
<td>4.3</td>
<td>US</td>
</tr>
</tbody>
</table>

The Tokyo Model

• Market and property rights based system with little possibilities for local interference.
• **Key differences to the US:**
  • Subject to the zoning rules, the rights of landowners are strong. Japan’s constitution declares that “the right to own or to hold property is inviolable.”
  • In the U.S. zoning classifications are exclusionary. For example, a lot zoned commercial is restricted to that single use.
  • In Japan, zoning classifications are inclusionary. Each zone has a maximum use category, with any “lesser” use still being allowable.
  • Of only 12 zoning categories in the whole country, the lowest allows for far more density than single-family detached zones in the US.
  • All zoning is by-right.
  • Local jurisdictions have little discretion in setting their own zoning rules or hindering development.
• **Why it works:**
  • Allows for more natural development within loose confines through markets rather than planners.
  • Triggers an automatic supply response when land prices rise (conversion to a higher and better use).
  • Ensures that new homes are affordable, which enables rapid filtering to free up supply at the low end.
• **Outcomes:**
  • Lots of new construction.
  • Housing in Tokyo is far more affordable than in comparable megacities.
  • More mixed-use/walkable neighborhoods.
  • Rapid replacement of obsolete units.
The concept of highest and best use

Vienna, VA example:
- Due to high land values and absent the opportunity to increase density, homes are being converted into McMansions.
- Lot sizes would certainly support moderately higher density. For example, 4 units at roughly 1,500 sq. ft. each would likely be valued at $900k, or $3.6m combined.
- And, as a result, property tax revenue for this lot and builder profits would be much higher.
- Japan’s zoning allows property owners to take advantage of a higher and better economic use of the land. Ironically, it is similar to land use patterns prevalent prior to the 1921 introduction of exclusionary zoning in the U.S.

Source: Google, Zillow, AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing).
Honolulu County added almost 18,000 single family detached homes since 2000 at a median as built density of 8 units/acre. (In Maui, the median density is only about 6 units/acre.) At 50% higher density, this could have added another 9,000 units, while lowering home prices and adding extra tax revenue. This would have turbocharger filtering.

Note: Only counties that include the top 100 metros and that have >1,000 household counts are included. The property tax revenue is calculated by units per acre times AVM, and the least dense one in each county is indexed to 100 (upper left). Size of the dots represent the property tax revenue index. Limited to single family homes that were built in 2000 or later. Lot sizes are limited to those between 3,000 sq. ft. (14.5 units/acre) and 45,000 sq. ft. (0.97 units/acre). Homes are binned into 10 equally sized bins based on their lot size. Regression analysis controls for year built and the census tract of the property.

Source: AEI Housing Center
Lot Size, Gross Living Area (GLA), Price, & Indexed Property Tax Revenue

Maui County HI: Lot Size, Gross Living Area (GLA), Price, & Indexed Property Tax Revenue

Note: Size of the dots represent the property tax revenue indexed to the yield from the least dense binned category (upper left), which equals 100. Limited to single family homes that were built in 2000 or later. Lot sizes are limited to those between 3,000 sq. ft. (14.5 units/acre) and 45,000 sq. ft. (0.97 units/acre). Homes are binned into 10 equally sized bins based on their lot size. Regression analysis controls for year built and the census tract of the property. **Data used totaled around 6,300 homes.**

Source: AEI Housing Center
Why adding supply at the middle of the price range is so important

- The sweet spot is building at the middle of the price range. Light Touch Density facilitates this.
  - Building only at the high end (through mandating inclusionary zoning for example) is inefficient:
    - Won’t provide the required supply response,
    - Supply takes a long time to filter down, and
    - You may run out of buyers.
  - Building new units at the low end requires heavy subsidies.

- New supply in the middle price range facilitates the filtering process, where older homes are made available to lower income households.
  - Thought experiment: Imagine car manufacturers could only build Ferraris.
    - Price of existing cars would sky-rocket.

- Increased housing cost burdens
- Increased homelessness
- Growing numbers of obsolete units

- Obsolete units upgraded or demolished

- Reduced housing cost burdens on low-income renters and buyers
- Offers many more ownership opportunities, helps close the socio-economic status wealth gap, and reduces homelessness.
- Adds a wider variety of structure types, more owner and renter opportunities, and across a broader range of price points.
Japanese Zoning

- Federal government sets 12 categories of Land Use Zone. In all but 1 (exclusively industrial), residential housing is allowed.

- Zoning laws and building codes are all set at the national level. Localities only have the ability to map zones, which must be approved by the national government.

- Category I exclusively low-rise residential zone is not limited to single-family detached, as is the standard in the U.S. It also allows for light touch density with small stores, duplexes, and three-story apartment buildings.

- If a city wants to zone for big commercial stores or offices, the city is forced to allow a variety of "lesser" uses in the same zone, including residential.

Japanese Building Restrictions

- Local jurisdictions have limited discretion over zoning.
- Per zone, they are allowed to set a maximum floor area ratio and a maximum building coverage, which are fairly high by US standards.
- There are no parking requirements.

**Floor Area Ratio and Building Coverage Ratio Regulations in Land Use Zones**

<table>
<thead>
<tr>
<th>Category of Land Use Zone</th>
<th>Maximum floor-area ratios (%)</th>
<th>Maximum building coverage ratios (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I exclusively low-rise residential zone</td>
<td>50 60 80 100 150 200</td>
<td>30 40 50 60</td>
</tr>
<tr>
<td>Category II exclusively low-rise residential zone</td>
<td>50 60 80 100 150 200</td>
<td>30 40 50 60</td>
</tr>
<tr>
<td>Category I mid/high-rise oriented residential zone</td>
<td>100 150 200 300 400 500</td>
<td>30 40 50 60</td>
</tr>
<tr>
<td>Category II mid/high-rise oriented residential zone</td>
<td>100 150 200 300 400 500</td>
<td>30 40 50 60</td>
</tr>
<tr>
<td>Category I residential zone</td>
<td>100 150 200 300 400 500</td>
<td>50 60 80</td>
</tr>
<tr>
<td>Category II residential zone</td>
<td>100 150 200 300 400 500</td>
<td>50 60 80</td>
</tr>
<tr>
<td>Quasi-residential zone</td>
<td>100 150 200 300 400 500</td>
<td>50 60 80</td>
</tr>
<tr>
<td>Neighborhood commercial zone</td>
<td>100 150 200 300 400 500</td>
<td>60 80</td>
</tr>
<tr>
<td>Commercial zone</td>
<td>200 300 400 500 600 700 800 900 1000 1100 1200 1300</td>
<td>80</td>
</tr>
<tr>
<td>Quasi-industrial zone</td>
<td>100 150 200 300 400 500</td>
<td>50 60 80</td>
</tr>
<tr>
<td>Industrial zone</td>
<td>100 150 200 300 400</td>
<td>50 60</td>
</tr>
<tr>
<td>Exclusively industrial zone</td>
<td>100 150 200 300 400</td>
<td>30 40 50 60</td>
</tr>
</tbody>
</table>

Japanese Building Height Restrictions

- Only the lowest zoning category (low-rise residential) has a height limit of 12 meters (about 35 ft.).
- For most of urban Japan, the only limits on height are lenient restrictions on floor-area ratio and codes which ensure sufficient sunlight.
- Building heights are primarily determined by the size of the road and the building set back.
- The farther the building is set back from the street, the higher it can be.
- The wider the street is, the higher the buildings that can be built next to it.

Source: http://urbankchoze.blogspot.com/2014/04/japanese-zoning.html
Tokyo: Low Rise Residential Zone - Example

Generally 2-3 story buildings

Source: https://www.google.com/maps/search/Shin-Koiwa+Station/@35.7305336,139.868933,42a,35y,80.44h,76.61t/data=!3m1!1e3
Tokyo: Low Rise Residential Zone – Example (Cont.)

The lot size is of about 1,000 sq. ft., which equates to a density of about 40 units per acre.
Generally 3-4 story buildings, with some larger ones

Notice the single-family detached home with large garden on a 10,000 sq. ft. lot in the lower left.

Source: https://www.google.com/maps/search/Shin-Koiwa+Station/@35.7120955,139.8640733,122a,35y,3.74h,50.97t/data=!3m1!1e3
Examples of 4-6 story buildings.

Source: https://www.google.com/maps/@35.7147902,139.8645723,3a,75y,283.91h,109.29t/data=!3m6!1e1!3m4!1s61Tn6WNZ-AMzRQz69WgAA!2e0!7i16384!8i8192
Tokyo’s Housing Stock

The market and property rights based system with little possibilities for local interference has allowed Tokyo to build its way to abundant housing.

- Since 1963, its housing stock has tripled in size, from 2.5 million homes in 1963 to 7.6 million in 2018.
- It has added on average about 80,000 to 100,000 new housing units per year since 1963 or about 1.5% per year, about twice as fast as Paris, London, or New York.

Tokyo’s Housing Stock by Type

- As Tokyo has grown, the city has added more units in larger buildings.
  - In 1978, there were 800,000 homes in Tokyo in apartment buildings of ≥ 3 stories.
  - In 2018, there were 3.8 million.

- Housing growth has been achieved primarily through higher density rather than sprawl.
  - Acreage devoted to housing in Tokyo grew by around 2% between 2008 and 2018, whereas the number of homes grew by 12%.

Source: Tokyo Statistical Yearbook
Tokyo’s home prices and population growth: A comparison

- **Tokyo** demonstrates the efficacy of high density: Making new construction easy leads to lots of it and creates affordability.

- In 2014 with a population of 13 million, builders in Tokyo proper started construction of more than 142,000 homes. That’s far more than the 84,000 new homes started that year in the entire state of California, which has three times the population.

- As a result, Tokyo’s change in home prices compares favorably to other major cities such as London or San Francisco.

% Change in house price and population, 1995-2015

Sources: AEI Housing Center; Financial Times, Office for National Statistics; Census Bureau; Tokyo Kantel; Ministry of Land, Infrastructure & Transport
Tokyo’s rental stock and rents

With supply expanded greatly in Tokyo prefecture & greater Tokyo from 2008-2018 (left graphic), rents have declined by 9% & 7% respectively in Tokyo prefecture & greater Tokyo (right graphic).

* Tatami mat is a unit of measure for area equivalent to 16.5 square feet
Excludes public, social, & employer-provided homes which were 23% of metro total in 2008, 18% in 2018.
Tokyo’s Mixed-use / Walkable Oriented Developments

A small grocery store on the left, a butcher on the right, a small office building, and a barber shop with enough residential to support these activities.

Source: https://www.google.com/maps/@35.7233579,139.8489457,3a,75y,278.7h,104.95t/data=!3m6!1e1!3m4!1sMrnYeBDo614dakmb6YJWcQ!2e0!7i16384!8i8192
Tokyo’s Obsolescence

- In Tokyo, the median year of construction for existing dwellings was between 1991 and 2000, about 25 years ago.
- In Hawaii, the median year built for residential units was 1978, which is slightly younger than the national median (1977). Among the Counties, Honolulu’s homes are the oldest with a median build year of 1975, followed by Maui and Kaua’i Counties (1984) and Hawai’i County (1987).

Home Construction in Hawaii

• The main culprit for Hawaii’s unaffordability is a plunge in supply dating from the early-1970s.
• This is similar to what happened in Coastal California, only during the 1950s.
• This plunge followed the establishment of its land use commission in the 1960 and the passage of Hawaii’s state Environmental Policy Act of 1974.
• According to the University of Hawaii Economic Research Organization replicating the Wharton Residential Land Use Index in 2021, Hawaii County has the highest land use restrictions of the 30 most expensive counties in the country. Maui, Kauai and Honolulu counties also ranked in the top third.

The Problems with Hawaii’s Building Code

- **Maui’s building code** is very restrictive with restrictions on lot sizes, building areas, building heights, and setbacks. (Compare that with Japan’s restrictions on earlier slides.)

- The building code makes Tokyo-style higher density or conversion to a higher and better use near impossible that is both economically viable and legal.

- While both a duplex and a two-family dwelling (detached) are allowed in R-1, R-2, and R-3 zones, they all require more land than for a one-family dwelling (detached) unit, which makes these types of structures practically not buildable in these zones.

- A similar situation may be present with Accessory Dwelling Units (ADU), which in zone R-1 are only allowed up to 500 sq. ft. in size: While legal, there is little evidence of legal ADU construction in Maui.

<table>
<thead>
<tr>
<th>Development Standard</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R-1</td>
</tr>
<tr>
<td>Minimum lot area (square feet)</td>
<td></td>
</tr>
<tr>
<td>Single-family dwelling</td>
<td>6,000</td>
</tr>
<tr>
<td>Each additional dwelling</td>
<td>6,000</td>
</tr>
<tr>
<td>Yards (feet):</td>
<td></td>
</tr>
<tr>
<td>Front</td>
<td>15</td>
</tr>
<tr>
<td>Side and rear</td>
<td>6-10</td>
</tr>
<tr>
<td>Maximum height (feet)</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: Grassroot Institute of Hawaii and Maui Municipal Code.
The Problems with Hawaii’s Building Code

• Oahu’s building code is very restrictive with restrictions on lot sizes, building areas, building heights, and setbacks. (Compare that with Japan’s restrictions on earlier slides.)

• The building code makes Tokyo-style higher density or conversion to a higher and better use near impossible that is both economically viable and legal.

• While both a duplex and a two-family dwelling (detached) are allowed in R-3.5, R-5, and R-7.5 zones, they all require more land than for a one-family dwelling (detached) unit, which makes these types of structures practically not buildable in these zones.*

• A similar situation may be present with Accessory Dwelling Units (ADU): While legal, there is little evidence of ADU construction in Honolulu.

*For example, in R-7.5 the median lot square footage is around 7,500 square feet, yet a duplex (two units) or a two-family dwelling effectively requires 14,000 square feet.

Source: https://www.oahure.com/pdf/zoning.pdf
The Problems with Hawaii’s Zoning

- Maui’s zoning for Kahului is dominated by agriculture land. The majority of the residential land is zoned for lower density R-3 and R-2.

Source: Geoportal Hawaii
Housing Density in Hawaii

- Hawaii’s housing units are either not dense at all (< 3 units per acre) or very dense (40+ units per acre).
- California’s housing is a bit more low density (3-5 unit per acre) and a bit more light touch density (9-22 units per acre).
- The major cities in Hawaii have densities slightly above Houston’s, which has plenty of land available.

![Percent of housing units by housing unit density: by State](chart.png)

<table>
<thead>
<tr>
<th>City</th>
<th>Population per Square Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paris</td>
<td>53,000</td>
</tr>
<tr>
<td>New York City</td>
<td>27,222</td>
</tr>
<tr>
<td>Singapore</td>
<td>21,646</td>
</tr>
<tr>
<td>San Francisco</td>
<td>18,850</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>17,311</td>
</tr>
<tr>
<td><strong>Tokyo Prefecture</strong></td>
<td><strong>16,121</strong></td>
</tr>
<tr>
<td>Sydney</td>
<td>15,247</td>
</tr>
<tr>
<td>London</td>
<td>14,550</td>
</tr>
<tr>
<td>Seattle</td>
<td>9,396</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>8,499</td>
</tr>
<tr>
<td><strong>Honolulu</strong></td>
<td><strong>5,606</strong></td>
</tr>
<tr>
<td>Pearl City</td>
<td>4,967</td>
</tr>
<tr>
<td>Houston</td>
<td>3,632</td>
</tr>
</tbody>
</table>

Note: housing unit density is calculated as the number of housing units per acre for each census block. This metric may slightly understate density as it may include areas not available for development.

Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing).
How to Address Hawaii’s Affordability Problem?

Since Hawaii’s affordability problem is so immense, Hawaii needs a mix of policies centered around Light Touch Density (LTD) for both greenfield construction and infill conversion as well as higher density near existing commercial areas.

1. More greenfield development at higher density by opening up modest amounts of land for development.

2. Conversion of older homes to a slightly higher density by ending exclusionary zoning polices that only allow single-family homes and in their place substitute market-oriented, by-right policies.

3. Allow by-right higher density development around areas of commercial activity through Walkable Oriented Developments (WOD).

Hawaii should not:

1. Continue with policies that simultaneously create scarcity and raise costs (such as income-based inclusionary zoning, rent control, and other policies that distort the market).

2. Attempt superficial policy fixes that don’t treat the root cause (such as ban on foreign ownership or restrictions on out-of-state buyers).

3. Replicate the Singapore or Vienna Social Housing Models.
How to enable market-oriented housing policies in Hawaii

• The Hawaii legislature should follow the example of Tokyo and establish a market and property rights based system with little possibilities for local interference.
  • Give property owners by-right freedom to build on their own land.
  • Legalize fast and economical construction, allow adaptation, and keep it simple.
    • Place limits on how strict local rules can be, especially when regulations infringe on reasonable and safe land uses or result in high housing costs.
    • Legalize Accessory Dwelling Units (ADUs), duplexes, triplexes, fourplexes, townhouses, cottage courts, courtyard apartments, and lot splitting in residential, multifamily, and commercial zones.
      • Learn from California’s ADU and SB 9/SB 10 legislation.
  • Address constraints on development due to inadequate water and sewer, by:
    • Rewarding cities and counties that adopt expansive LTD and high density policies with sewer and water funding.
    • Encouraging tax- and utility customer-increment infrastructure financing.

• The guiding principle should be that if something is allowed for detached single-homes, it should be allowable for higher densities as well.
  • Detached single-homes don’t have a limit on renters, rents, dwelling square footage, occupant income, etc.

• The result will be the revival of “small-scale development...to shape and grow our cities... a "swarm" of builders and rehabbers.”
Ways to improve on greenfield developments

• Development in Kapolei of 1,800 sq. ft. homes on 8,000 sq. ft. lots built in 2012 with an estimated value today of around $1.35m.

• Density of 5 units per acre with a floor area ratio of 23%.

• With slightly smaller lots of around 5,000 sq. ft., an additional 3 units could have been built, which may today be valued at around $1.10m (20% less)

Source: Google.
Ways to improve on greenfield developments (cont.)

- Development of 1,500 sq. ft. homes on 4,000 sq. ft. lots built in 2001 in Ewa Beach.
- Garages take up valuable land.
- Density of about 10 units per acre with a floor area ratio of about 38%.

Source: Google.
• Duplex (2 units) with about 2,000 sq. ft. on 5,000 sq. ft. lot built in 2001 in Palisades Park.

• Density of about 16 units per acre with a floor area ratio of 80%.

• The slightly higher building height allows for the garage to be incorporated in the structure, thus freeing up valuable land structure and reducing the associated land cost.

Photo source: Google.
Ways to improve on greenfield developments (cont.)

Townhomes with 1,750 sq. ft. on 1,250 sq. ft. lots in Seattle. Density of about 32 units per acre with a floor area ratio of 140%.

Photo source: Google.
Hawaii is ready for Light Touch Density infill conversions

Over the last 20 years, Honolulu and Maui Counties has built almost no townhomes, which are indicative of conversion to a higher and better use.

For single-family detached homes the:

- Median lot size is 6,200 sq. ft. / 9,000 sq. ft. in Maui
- Median floor area ratio is 26% in Honolulu / 16% in Maui
- Median year built is 1971 in Honolulu / 1986 in Maui
- Median land share for older homes is estimated at around 75%. Normal would be around 30-40%.

The conversion to LTD homes becomes economical for the private sector under such circumstances. Older 1-unit homes may be torn down and replaced with duplexes, triplexes, or other higher unit count structures. ADU additions or garage conversions should also be legal.

However, the conversion to higher densities can only occur under by-right zoning laws and only when localities make infill construction legal, easy, economical, and feasible.

LTD infill conversion represents a fiscally responsible alternative to expensive infrastructure improvements. Infill development is estimated to require 20% of the infrastructure costs per unit as greenfield development.

Smaller units, duplexes and ADUs provide more housing choices at different price points.
Quantifying the potential of Light Touch Density

For Honolulu County:

**Greenfield:**
There is about 100,000 acres of land zoned for agriculture. This cannot be the highest and best use of the land. Making 2% of that land available at 15 units per acre could add about 30,000 new single family housing units over a decade.

**Conversion:**
Of the about 140,000 single family detached homes on the island, about half are ripe for a higher and better use conversion. This could results in:

- About 35,000 homes with a lot size of 5-6,000 sq. ft. could converted to a duplex => 35,000 new
- About 30,000 homes with a lot size of 7-9,000 sq. ft. could converted to a triplex => 60,000 new
- About 6,000 homes with a lot size of 10,000+ sq. ft. could converted to a quadraplex => 20,000 new

Assuming that 20% of those homes could get converted over a decade, this would yield an additional 20,000 to 25,000 new housing units.

**In total, 50,000 to 55,000 new units could be added over a decade through market forces.**

- This compares to 5,000 to 6,000 units built from 2010-2020.
- This addition represents about 1/6 of the current total housing stock.
- Allowing even higher density in certain areas could further increase this number.
- This would ensure that Hawaii meets its housing demand over the next decade estimated at around 36,000 or 25,000 to 45,000 new units.

For Maui County, the total over a decade could easily total from greenfield at 12 units per acre about 24,000 and from conversion about 2,000 (9,000 eligible out of 27,000 total at 20% conversion) for a total of 26,000 new units.

* AEI Housing Center calculating based on estimated structure value, replacement cost, and with an assumed modest floor area ratio of 60-80% depending on the size of the lot.
Arguments for allowing Light Touch Density

• A way of reducing the economic rationale and need for monster homes
• Market-driven: benefits small scale developers and homeowners
• Restores property rights
• Offers gradual change and avoids unintended consequences
• Addresses need for more and affordable housing
• Fiscally responsible
• Broadens the tax base, which may allow rates to fall
• Replaces functionally obsolete homes having low energy efficiency, and deferred maintenance
• Meets the need for more workforce housing
• Jumpstarts the filtering process
• Creates a virtuous cycle as modest residential density boosts increase urban/suburban vitality and the number of amenities. This is good for property values and the tax base.
• Reverses zonings sordid history
• Will eventually create housing type and home price diversity
• Enables children and grandchildren to buy a home and live in desirable areas
• Represents the middle ground between doing something highly disliked or nothing/too little.
  • California just legalized light-touch density.
  • Zoning needs to be addressed at the state and local level.

• Additional arguments for LTD in Walkable Oriented Development areas around commercial areas:
  • May splinter the NIMBY opposition
  • Opens up areas of opportunity.
  • While density will increase, if combined with areas of commercial activity, the area’s walkability helps offset additional traffic.
  • Enhances walkability and provides vibrancy to commercial areas
  • Helps local businesses
  • Helps service sector workers by bringing them closer to jobs

Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing)
Hawaii Should Not Continue with Policies That Create Scarcity and Raise Costs

Policy examples include:
Income-based inclusionary zoning, rent control, subsidized housing, and other policies that distort the market (see appendix).

Why they have failed:
Do not tackle the root cause, but rather the symptom.*
Distorts the market, creates a few winners, but mainly makes housing construction more expensive. Thus, fewer homes are built.

What is the consensus:
Some think tanks with progressive leanings, including the City Observatory, the Sightline Institute, and the Upjohn Institute that have come around to this view (see appendix).

What will happen if policymakers chose this option:
Affordability will further worsen. The opportunity to live and work in Hawaii will continue to erode. More McMansions will be built but lower-income residents will be permanently unable to buy a home. Some will fall into homelessness. Others will migrate to the mainland.

* Similarly, a ban on foreign ownership also does not tackle the root cause and would likely not free up many units. “According to data from Title Guaranty, less than 3% of the homes sold in Hawaii last year were purchased by foreign buyers. That’s 539 homes, down 42% from the 929 properties foreign buyers bought in 2018. Nearly 80% of the roughly 16,000 homes sold in 2019 were purchased by local buyers. The second largest group of purchasers were those from California, who bought about 1,500 properties.” (Hawaii Public Radio)
Vienna Social Housing Model

Much in the US media about the model is written by progressives, but German-speaking media and academics are more critical.

One recent study concludes that the Vienna model is “expensive, insecure, conflict-prone, burocratic, not transparent, and unjust.”

The authors state that the one thing to learn from it is “the marketing” on how to sell the model as a success.

Vienna’s public housing:

• Has low rents on paper, but they are similar to large German cities when utilities, repairs and maintenance, or taxes are included.

• Has due to low rents, not enough money to maintain existing housing, which is leading to growing income segregation and manifests itself in a growing high vacancy rate.

• Is financially unsustainable:
  • Vienna does not disclose a no budget
  • It apparently does not have money to finance new housing construction despite a growing population

Another report concludes that Vienna’s housing market

• Creates insiders and outsiders:
  • Since housing can be bequeathed, certain groups benefit for generation from low rents
  • Frozen out are newcomers like young families, who face higher rents in the private market

• Housing is underutilized as older households stay in large units

• Unjust with higher income groups paying low rents as rents are set when people move in

• Requires lots of cross-subsidies and is as expensive as public universities.

One big positive feature of the Vienna model is that it is building homes at a faster rate than some comparable German cities. That is due to its foresight of designating at least 10 years of buildable land aside. The city has monopsony powers over purchasing land and is making this land at below market rates available to public-private partnerships.
ALOHA Homes and the Singapore Social Housing Model

Appealing because it works:

- **Homeownership** rate of around 90%.
- 80% of residents live in high-quality Housing and Development Board (HDB) flats.
- Once held for five years, owners may sell an HDB flat at a market price.
- Been largely **successful** in creating a cohesive society through racial and income quotas for citizens.
  - Racial quotas introduced in 1989 in response to evidence that ethnic groups tended to **re-segregate**.
- Mix of housing and public amenities.
- Relatively affordable housing through:
  - Subsidies for new HDB housing available for **1st-time buyers** and **lower- and middle-income families**.
  - Strong macro-prudential regulations: Foreigners and those buying second homes can be charged increasingly large surcharges.

Why Singapore may be unique and not a suitable model for Hawaii’s ALOHA Homes

- Clean slate after independence (Singapore consisted mostly of shanty towns).
- Few barriers to increasing supply.
- “Mortgages are usually provided at a **preferential rate** that is subsidized by below-market returns on the provident fund savings.”
- Government owns 90% of the land and can acquire private land at low cost.
- It is a city-state that is often described as **authoritarian** or an **authoritarian state**.*

What are the downsides?

- Might not be scalable.
- Subsidies can encourage **waste** and lead to political profit (rent) seeking and fraud.
- Could end up like U.S. style public housing, with income stratification and poor maintenance.
- Government housing in the U.S. is expensive to build and tends to exceed budget.

* Freedom House rates Singapore as having **partly free** form of government (a score of 48 out of 100). Its political rights score is 19 out of 40 and its civil liberties score is 29 out of 60. In contrast, the U.S. has a **free** form of government (a score of 83 out of 100), with a political rights score of 32 out of 40 and a civil liberties score of 51 out of 60.
Further readings

Link to Housing Center’s Light Touch Density ebook:
Light Touch Density: A Series of Policy Briefs on Zoning, Land Use, and a Solution to Help Alleviate the Nation’s Housing Shortage

Link to Walkable Oriented Development Web Map:
https://www.aei.org/walkable-oriented-development-cluster-map/

I grant permission to reuse this presentation, as long as you cite as the source: AEI Housing Center, www.aei.org/housing.
Appendix
Option 2: Real World Example – Japan

- Subject to the zoning rules, the **rights of landowners are strong**. Japan’s **constitution** declares that “the right to own or to hold property is inviolable”.
- In the U.S. zoning classifications are exclusionary. For example, a lot zoned commercial is restricted to that single use.
- In Japan, zoning classifications are inclusionary. That is they set a maximum use, with any “lesser” use still being allowable (See Chart). **All zoning is by-right**.
  - “Category I exclusively low-rise residential zone” (blue outline) is not limited to single-family detached, as is the standard in the U.S. Also allows for small stores, duplexes, and three-story apartment buildings.
  - “Category I mid-high rise oriented residential zone” (red outline) allows medium to high residential buildings, along with hospital and university buildings, certain types of shop buildings with a floor area of up to 500m², and all permitted uses to the left. This promotes mixed use.

Honolulu County HI: Lot Size, Gross Living Area (GLA), Price, & Indexed Property Tax Revenue

Note: Size of the dots represent the property tax revenue indexed to the yield from the least dense binned category (upper left), which equals 100. Limited to single family homes that were built in 2000 or later. Lot sizes are limited to those between 3,000 sq. ft. (14.5 units/acre) and 45,000 sq. ft. (0.97 units/acre). Homes are binned into 10 equally sized bins based on their lot size. Regression analysis controls for year built and the census tract of the property. Data used totaled around 17,700 homes.
Maui County HI: Lot Size, Gross Living Area (GLA), Price, & Indexed Property Tax Revenue

Note: Size of the dots represent the property tax revenue indexed to the yield from the least dense binned category (upper left), which equals 100. Limited to single family homes that were built in 2000 or later. Lot sizes are limited to those between 3,000 sq. ft. (14.5 units/acre) and 45,000 sq. ft. (0.97 units/acre). Homes are binned into 10 equally sized bins based on their lot size. Regression analysis controls for year built and the census tract of the property. Data used totaled around 6,300 homes.
Note: Size of the dots represent the property tax revenue indexed to the yield from the least dense binned category (upper left), which equals 100). Limited to single family homes that were built in 2000 or later. Lot sizes are limited to those between 3,000 sq. ft. (14.5 units/acre) and 45,000 sq. ft. (0.97 units/acre). Homes are binned into 10 equally sized bins based on their lot size. Regression analysis controls for year built and the census tract of the property. Data used totaled around 13,500 homes.
Tailwinds for Market-Oriented Policies

These policies have appeal because they work. They are being enacted or under consideration in many jurisdictions.

- Real world case studies from Tokyo, Palisades Park, NJ, Seattle, and Charlotte demonstrate the efficacy of zoning changes in making substantial additions to supply.

- A tailwind favoring such policies has developed.
  - Other jurisdictions have adopted by-right Light Touch Density (LTD), including Oregon and Minneapolis, and many others have legislation under consideration, including Washington state, New York state, and Ontario, Canada.
  - Ontario, Canada’s Housing Affordability Task Force summarized the problem this way:
    “Land is not being used efficiently across Ontario. In too many neighbourhoods, municipal rules only allow single-family homes – not even a granny suite. Taxpayers have invested heavily in subway, light rail, bus and rail lines and highways, and the streets nearby are ideally suited for more mid- and high-rise housing. Underused or redundant commercial and industrial buildings are ripe to be redeveloped into housing or mixed commercial and residential use. New housing on undeveloped land should also be higher density than traditional suburbs, especially close to highways.”

- California faces similar challenges as Hawaii and it has enacted:
  - Expansive accessory dwelling unit (ADU) legislation, allowing for substantial additions to supply.
  - SB-9 LTD bill which took effect on Jan. 1, 2022.
    - Allows two-units on a lot and lot splitting by-right.

Real world examples on how to overcome NIMBY opposition:
Terner Center, Jumpstarting the Market for Accessory Dwelling Units: Lessons Learned from Portland, Seattle, and Vancouver, Chapple, et al.
Minneapolis, ADUs in CA: A Revolution in Progress, AEI Housing Center on ADUs
But what about …?

- My property value?
  - Despite common concerns among home-owners, home prices will likely not decreased.
  - See Seattle example.
  - In fact, home values may go slightly up due to option value of LTD.
- Congestion and traffic?
  - Walkability helps offset that.
  - Parking requirements.
- NIMBYs?
  - WOD might splinter them.
- Infrastructure cost?
  - After 50 years, most of the infrastructure will need to get replaced anyways.
- Overcrowding?
  - Family sizes have shrunk over time.

The chart shows that the constant-quality home price appreciation (HPA) was about identical between the Low-rise multifamily (LRM) and the Single-Family (SF) zones until the start of the pandemic. Since then HPA trends have slightly diverged due to a desire for more living space and larger lots. Time will tell whether this HPA differential remains.

Source: AEI Housing Center, www.AEI.org/housing.
## How to build a winning coalition around WOD?

<table>
<thead>
<tr>
<th>Group</th>
<th>How WOD appeals to them</th>
</tr>
</thead>
<tbody>
<tr>
<td>Builders, Realtors, &amp; Bankers</td>
<td>More homes to build; more homes to sell; more loans to originate.</td>
</tr>
<tr>
<td>Environmentalists</td>
<td>Limits urban sprawl, reduces vehicle emissions; environmentally friendly new homes; avoids McMansions.</td>
</tr>
<tr>
<td>Market and deregulation oriented, fiscal conservatives</td>
<td>Minimal infrastructure spending compared to green field development. Deregulation increases property rights and speeds building. Private sector driven, little need for subsidies.</td>
</tr>
<tr>
<td>Home owners</td>
<td>All else equal, property values will increase as the land has more value because it can be converted to a higher and better use, but the cost of land per newly built housing unit goes down; provides housing opportunities for one’s children and grandchildren. Lower property taxes.</td>
</tr>
<tr>
<td>NIMBYs</td>
<td>Less opposition: limited to a predefined, relatively modest area which already has mixed use, avoids high-rise development; and offers a range of housing options for one’s children and grandchildren.</td>
</tr>
<tr>
<td>Taxpayers</td>
<td>Prospect of lower taxes due to increased commercial activity and a broader residential tax base with minimal outlays for new infrastructure.</td>
</tr>
<tr>
<td>Local businesses</td>
<td>Offers a larger customer base and makes it easier to attract the additional workers able to live in the WOD. Benefits from lower taxes.</td>
</tr>
<tr>
<td>Municipalities and states</td>
<td>Provides additional tax revenues, rehabilitates and strengthens neighborhoods, promotes economic development, limits sprawl, uses existing infrastructure (sewers, utilities, streets, sidewalks, street lights, schools, trash collection, parks, fire and police.)</td>
</tr>
<tr>
<td>Services workers</td>
<td>Increased housing opportunity to live and work in the same area due to reduced commuting costs and wider range of home prices and rents. 48% of jobs &lt;$40,000 located in WODs.</td>
</tr>
<tr>
<td>Employers</td>
<td>Need affordable workforce housing. Establish satellite offices and flexible work spaces in WOD areas located near employees’ homes.</td>
</tr>
</tbody>
</table>

Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing)
Additional benefits of Walkable Oriented Development

- Present in nearly every community, including small towns.
- By relying on existing infrastructure and private action and investment, minimal public investment and subsidies are required. Traditional Transit Oriented Development requires both. This reduces political profit (rent) seeking.
- **Small infrastructure improvements can yield big dividends:**
  - Adding sidewalks and walking paths can enhance WODs and commercial vitality.
- Health benefits from walking.
- Fewer carbon emissions due to walking and newer housing stock.
- Time savings from proximity to work place.
- Rezoning WODs for LTD would provide many benefits and is a fiscally responsible alternative to expensive infrastructure improvements.
  - Infill development is estimated to require 20% of the infrastructure costs per unit as greenfield development.

Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing)
What is holding back new home construction?

“5Ls”: Labor, Lumber, Laws, Lots and Lending.
It mostly boils down to Laws and Land:
  - Zoning artificially limits density, thus making buildable land both scarce and high priced.
  - Urban Growth Boundaries artificially limit where can be built, thus again inflating land prices.
  - Burdensome regulations limit what can be built, driving up construction costs.

- New construction share of sales in 2021:Q4 was 11% for the entire nation.
- It ranged from 32% in Austin to 3% in Milwaukee.
- Yet, more glaring differences arise when looking within individual markets.

This and other housing market indicators available at [https://www.aei.org/national-and-metro-housing-market-indicators/](https://www.aei.org/national-and-metro-housing-market-indicators/).
Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing).
Light Touch Density has the power to add to supply: Example from Charlotte, NC

- The profile from the street maintains a size consistent with adjacent one-unit homes.
- At 4 units, each home is valued at $440,000, near the bottom of neighborhood range of $400,000 to over $2 million.
- Each unit has 3bd/2ba with 1,500 sq. feet on a 12,000 sq feet lot.
- Modest density at 14 units/acre.

4-unit home as seen from the street  as seen from a slight angle  neighboring home

AEI Housing Center, www.AEI.org/housing.
### Unaffordability in Hawaii

- Median Price to Median Income Ratio

#### Price-to-Income Ratio

<table>
<thead>
<tr>
<th>Metropolitan Area</th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>3.1</td>
<td>3.5</td>
<td>3.5</td>
<td>4.4</td>
</tr>
<tr>
<td>San Jose-Sunnyvale-Santa Clara, CA</td>
<td>6.2</td>
<td>6.5</td>
<td>7.1</td>
<td>10.9</td>
</tr>
<tr>
<td>Santa Maria-Santa Barbara, CA</td>
<td>6.4</td>
<td>6.7</td>
<td>7.5</td>
<td>10.9</td>
</tr>
<tr>
<td>Santa Cruz-Watsonville, CA</td>
<td>6.4</td>
<td>7.8</td>
<td>8.0</td>
<td>10.8</td>
</tr>
<tr>
<td>Urban Honolulu, HI</td>
<td>8.1</td>
<td>5.4</td>
<td>8.8</td>
<td>9.5</td>
</tr>
<tr>
<td>Salinas, CA</td>
<td>6.0</td>
<td>6.9</td>
<td>4.5</td>
<td>9.5</td>
</tr>
<tr>
<td>Los Angeles-Long Beach-Anaheim, CA</td>
<td>6.0</td>
<td>4.7</td>
<td>7.1</td>
<td>9.4</td>
</tr>
<tr>
<td>San Francisco-Oakland-Hayward, CA</td>
<td>6.3</td>
<td>7.1</td>
<td>7.2</td>
<td>9.4</td>
</tr>
<tr>
<td>Kahului-Wailuku-Lahaina, HI</td>
<td>4.9</td>
<td>4.9</td>
<td>9.9</td>
<td>9.2</td>
</tr>
<tr>
<td>San Diego-Carlsbad, CA</td>
<td>5.2</td>
<td>5.4</td>
<td>6.3</td>
<td>8.5</td>
</tr>
<tr>
<td>Napa, CA</td>
<td>4.9</td>
<td>5.6</td>
<td>5.5</td>
<td>8.5</td>
</tr>
</tbody>
</table>

Source: Harvard Joint Center and AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing)
Open Up Modest Amounts of Land for Development

Appealing because it addresses one of the root causes—limited supply of green-field buildable land:

• 40% more developable land would be available if there was a modest increase from 5.1% to 7.1% of Hawaii’s land devoted to urban and rural use.

• Would likely run into less NIMBY opposition since development will occur further out, but opposition from environmental groups could be stiff.

• Needs to be combined with higher density than some prior greenfield development.

• However, opening up land for development would not address zoning and building restrictions, which work to make land expensive.*

What are some of the negatives?

• Requires larger infrastructure investment than Light Touch Density.

There appears to be some of it already underway

• Many homes built since 2000 have been situated around Ewa and Ewa beach, which used to be mostly agricultural areas (see map from Zillow.com).

• But much more is needed.

*Recent research has found that “The largest housing affordability differences between major metropolitan areas arose as significant restrictions on urban fringe housing development were applied. These measures are called ‘urban containment’ and include ‘growth management’ and ‘compact city’ policies. A principal purpose of urban containment is to curb the physical expansion of urban areas – that is, conversion of rural land to urban land, or what some refer to as “urban sprawl.” This can result in far higher housing costs.”

https://urbanreforminstitute.org/2021/02/demographia-international-housing-affordability-2021-edition/

Source: Zillow.
Conversion Case Study: Palisades Park and Leonia boroughs in NJ

- Relatively little vacant land available.
- Same markets for labor, lumber and lending.
- Only difference: Palisades Park due to a zoning quirk allowed by-right two-family homes on single-family lots.
- Since 1940, Palisades Park’s population has grown 154%, Leonia’s only 57%.
- This is due in part to the fact that Palisades Park has added 51% to its housing stock since 1969 while Leonia has only added 24% over the same period.
- Palisades Park experienced a 24% increase in its housing stock over the period from 2000 to 2013, while Leonia’s was flat.

- Evidence from Seattle demonstrates the same outcome.

Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing)
Why it works? - Case Study: Palisades Park, NJ (cont.)

- Duplex infill construction benefits homeowners by taking advantage of existing infrastructure.
- Allows the costs of maintaining a relatively fixed stock of infrastructure to be shared across a broader population base.
- As duplexes replaced single-family (SF) 1-unit structures, Palisades Park was able to lower property tax rates, which meant savings for the residents.
- Relative to detached SF units, duplexes’ higher population density can strengthen WOD areas.
  - In 2012 Palisades Park grossed $52 million in total accommodation and food services, compared to Leonia’s $5 million, while its population was about double Leonia’s. In terms of retail sales, Palisades Park grosses $190 million, compared to Leonia’s $118 million.

Source: AEI Housing Center, www.AEI.org/housing; New Jersey Division of Taxation.
Why it works? - Case Study: Palisades Park, NJ (cont.)

Businesses, like homeowners, can benefit from significantly reduced property tax rates when Light-Touch Density (LTD) is allowed in Walkable Oriented Development (WOD) areas.

Jurisdictions that allow LTD in WODs benefit from higher commercial property values.

Here we analyze commercial properties located along the Broad Avenue corridor – the primary commercial district of the area that stretches runs through both Palisades Park and Leonia.

1. **Moderate density increases commercial property values by approximately 63% per square foot.** This benefits the land owner.
2. Businesses, while paying higher rents, benefit from the **additional customers** due to the higher density.
3. Moderate density contributes to having more than 3x the square feet of commercial property in Palisades Park than in Leonia.
4. These trends coincide with a 1 percentage point (40%) lower property tax rate in Palisades Park than Leonia.
5. The reduction in tax rates outweighs the increase in property values, leading to a 20% lower commercial tax bill per square foot in Palisades Park: benefitting the property owner, the business tenant (if different from property owner) and customers.
6. Despite a lower tax rate and lower payments per square foot, Palisades Park generates 3x times the property tax revenue from commercial entities than Leonia. This benefits local government and residents.

<table>
<thead>
<tr>
<th>Commercial Property</th>
<th>Median Assessed Value (per sq. ft.*)</th>
<th>Median Property Taxes Paid (per sq. ft.)</th>
<th>Total Assessment Value</th>
<th>Property Tax Rate</th>
<th>Number of Properties</th>
<th>Total Sq. Footage</th>
<th>Tax Levied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palisades Park</td>
<td>$273</td>
<td>$4.0</td>
<td>$208.5m</td>
<td>1.57%</td>
<td>116</td>
<td>752,000</td>
<td>$3.0m</td>
</tr>
<tr>
<td>Leonia</td>
<td>$168</td>
<td>$5.0</td>
<td>$35.3m</td>
<td>2.55%</td>
<td>37</td>
<td>246,000</td>
<td>$1.1m</td>
</tr>
</tbody>
</table>

Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing); First American via DataTree.com; New Jersey Division of Taxation.
The inverse relationship between prices and supply

Over time, the single best predictor of home price appreciation (and affordability) is the ratio of supply to demand.

Source: MLS data/public records/Freddie Mac.
Job growth, new supply, and home price appreciation

Metros that artificially limit new construction activity, face faster home price appreciation.

For any level of employment growth, metros, that have had a higher share of new construction activity saw slower rates of home price appreciation.

Source: AEI Housing Center, www.AEI.org/housing.
Why it works? - Case Study: City of Seattle, WA

The Single Family (SF) zone contains almost 3 times as many units as the Low-Rise Multifamily (LRM) zone. However in terms of new construction activity, the LRM zone has about twice as many new units built as the SF zone. The new construction share for homes built in 2000 or later added about 7% to the existing stock in the SF zone, but added a whopping 35% to existing stock in the LRM zone and 10% was added to stock just since 2015.

In the SF zone, 1-unit homes are replaced with newer, much larger 1-unit homes (2,600 sq. feet for the new ones vs 1,800 for the existing ones) and at much higher costs ($1.25 million for the new ones vs $875,000 for existing ones). In the LRM zone, lots that had a 1-unit structure are generally replaced with single-family attached townhomes. These townhomes are only marginally larger in sq. feet than the existing stock of detached homes and with only a modest price premium over existing homes in the same zone.

A simple back of the envelope calculation suggests that if the City of Seattle up-zoned all of its SF zone to a LRM zone, and 20% of the 1-unit structures were replaced with duplexes, private enterprise could potentially add up to 25,000 housing units or 11% to the housing stock over a decade without subsidies.

### Table: City of Seattle Existing Housing Stock and New Construction Activity by Zone

<table>
<thead>
<tr>
<th></th>
<th>Single Family</th>
<th>Low-rise Multifamily</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Units</td>
<td>Built in 2000 or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>more recent</td>
</tr>
<tr>
<td># of units</td>
<td>124,000</td>
<td>8,800</td>
</tr>
<tr>
<td># of 1-units</td>
<td>116,000</td>
<td>7,700</td>
</tr>
<tr>
<td>% Additions to Housing Stock</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Median Lot Size</td>
<td>5,700</td>
<td>5,100</td>
</tr>
<tr>
<td>Median Living Area</td>
<td>1,800</td>
<td>2,700</td>
</tr>
<tr>
<td>Median Price (in $*)</td>
<td>875,000</td>
<td>1,245,000</td>
</tr>
<tr>
<td>Additions Price Premium over Existing</td>
<td>142%</td>
<td>149%</td>
</tr>
</tbody>
</table>

*Based on an Automated Valuation Model from Dec. 2020.  
Note: Values are slightly rounded for readability.
Why it works? - Case Study: Pecan Ave., Charlotte, NC

- Yellow highlighting covers homes along Pecan Ave. and Kensington Dr. There are 74 homes here. The area is zoned R22-MF meaning 22 units per acre.
- Blue highlighting covers home along The Plaza. There are 40 homes here. The area is zoned R-5 meaning 5 units per acre.

Source: AEI Housing Center, www.AEI.org/housing
Why it works? - Case Study: Pecan Ave., Charlotte, NC

*Charlotte R22-MF Zoning Offers a Wide Range of Price Points Compared to R-5 Zoning*

Note: every dot is a house on Pecan Ave., Kensington Dr., or The Plaza ordered by estimated value by Zillow or Redfin.

Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing)
Why it works? - Case Study: Pecan Ave., Charlotte, NC

1560 Pecan Ave, Charlotte, NC 28205
Individual condo sold separately in a four unit structure

1573 Pecan Ave, Charlotte, NC 28205 Townhouse

Source: Zillow and AEI Housing Center, www.AEI.org/housing

<table>
<thead>
<tr>
<th>Percentile:</th>
<th>25th</th>
<th>50th</th>
<th>75th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate:</td>
<td>$320,600</td>
<td>$354,700</td>
<td>$578,700</td>
</tr>
<tr>
<td>Square feet:</td>
<td>870</td>
<td>1,122</td>
<td>1,356</td>
</tr>
<tr>
<td>Year built:</td>
<td>1950</td>
<td>2001</td>
<td>1929</td>
</tr>
<tr>
<td>Rooms:</td>
<td>2 bd/1 ba</td>
<td>2 bd/2.5 ba</td>
<td>3 bd/2.5 ba</td>
</tr>
</tbody>
</table>
By-Right Light Touch Density (LTD): Duplexes and ADUs in Honolulu

When duplexes and ADUs are built in Hawaii, they provide more housing choices at different price points. A substantial body of research on the California ADU experience demonstrates the impact of ADUs.

Photo source: Zillow.
Why it works? - Case Study: Pecan Ave., Charlotte, NC

Using Census Bureau data at the block level, we find streets with higher density have a greater share of renters and a greater diversity of age among all residents, but particularly homeowners.

• Pecan & Kensington (left side of the black line) allow for greater density than the Plaza (right side).
• Yellow and red shading indicate a higher percentage of renters.

The increased share of renters and younger residents suggests that the increased density increases housing access to a wider range of incomes, particularly younger individuals or families with less financial wherewithal. Generally, these groups are among the first to be priced out of lower density neighborhoods.

<table>
<thead>
<tr>
<th></th>
<th>Pecan/ Kensington (left of black line)</th>
<th>The Plaza (right of black line)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Renters</td>
<td>42%</td>
<td>25%</td>
</tr>
<tr>
<td>% Under 35 (Owners)</td>
<td>35%</td>
<td>23%</td>
</tr>
<tr>
<td>% Under 35 (Renters)</td>
<td>56%</td>
<td>58%</td>
</tr>
</tbody>
</table>

Source: Census Bureau and AEI Housing Center, www.AEI.org/housing.
Advance Policies that Rely on a Market-Based Approach, Rather than Ones that Lead to Market Distortions and Generally Constrain Supply

• There is a growing consensus that the solution to making housing more affordable lies in adding more housing supply, not through government subsidies, income-based inclusionary zoning, rent control, and other policies that distort the market.
  • While supporters of a market-based approach have long espoused this position, there are some think tanks with progressive leanings, including the City Observatory and the Sightline Institute, and the Upjohn Institute that have come around to this view. See City Observatory’s "The End of the Housing Supply Debate-Maybe", City Observatory’s “Kevin Bacon & Musical Chairs: How Market Rate Housing Increases Affordability”, Sightline's "Yes You Can Build Your Way to Affordable Housing", W. E. Upjohn Institute’s "The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market", and VATT Institute’s “The supply of new market rate units triggers moving chains that quickly reach middle- and low-income neighborhoods and individuals.”

• End policies that are “designed” to create scarcity and high cost simultaneously.

• Hawaii’s solution lies in following the lead of California and others to restore “private property rights taken away by zoning restrictions to most property owners and rely on private markets.”
  • California has legalized light touch density in most single-home zones, in the form of accessory dwelling units, small lot homes, 2-family homes, and lot splitting.
Advance Policies that Rely on a Market-Based Approach, Rather than Ones that Lead to Market Distortions and Generally Constrain Supply

- Data and research can inform as to what does and does not work:
  - Income-based inclusionary zoning vs. by-right light touch density
    - “[I]nclusionary zoning policies...rarely substitute for relaxing zoning polices, particularly for building multi-family housing.” "How to Reduce Housing Costs? Understanding Local Deterrents to Multifamily Housing“ See also: Here’s How Affordable Housing Policies Have Impacted Hawaii’s Housing Supply.
    - “A year ago, in the height of the political season in deep blue Portland (in a county which voted 76 percent for Hillary Clinton) only one thing was rarer than Donald Trump lawn signs: For Rent signs. Portland was facing a housing shortage. Vacancy rates had been plummeting, and in early 2016, apartment rents were going up at double digit rates. The housing crisis prompted the City to adopt an ill-advised inclusionary zoning ordinance, and led the state to flirt with authorizing rent control.”
    - Portland urban economist on inclusionary zoning: “It's kind of a slow motion disaster. By the time you figure out this is really bad policy, it will be too late to do anything about it. [Portland’s] 2017 inclusionary zoning policy resulted in a rush of applications for new developments that could be grandfathered....After the initial rush, permitting is drying up.” https://www.bizjournals.com/pittsburgh/news/2019/06/14/portland-urban-economist-on-inclusionary-zoning.html
  - That was then. After lagging well behind growing demand for the past several years, housing supply is catching up [as a result of the rush described above]. And this is just starting to have an effect on rents. According to data compiled by Zillow, inflation in Portland area rents fell from a peak of more than 10 percent year over year in 2015 and 2016, to less than zero in August 2017. (https://cityobservatory.org/signs-of-the-times/)
    - [C]ertain kinds of policies in these programs can cause dramatic reductions in housing construction. And [inclusionary zoning] programs consistently produce too few units to be more than a minor part of housing affordability programs. https://www.manhattan-institute.org/exclusionary-effects-inclusionary-zoning-economic-theory-empirical-research
Advance Policies that Rely on a Market-Based Approach, Rather than Ones that Lead to Market Distortions and Generally Constrain Supply

• Data and research can inform as to what does and does not work:
  • Rent control vs. adding more supply
    • “While rent control appears to help current tenants in the short run, in the long run it decreases affordability, fuels gentrification, and creates negative spillovers on the surrounding neighborhood.” Brookings "What does economic evidence tell us about the effects of rent control?"
  • Ban on foreign ownership
    • “According to data from Title Guaranty, less than 3% of the homes sold in Hawaii last year were purchased by foreign buyers. That’s 539 homes, down 42% from the 929 properties foreign buyers bought in 2018. Nearly 80% of the roughly 16,000 homes sold in 2019 were purchased by local buyers. The second largest group of purchasers were those from California, who bought about 1,500 properties.” (Hawaii Public Radio)*
  • Subsidized housing vs. market rate construction
    • Filtering with market-rate construction has benefits over subsidized housing.
      • “[T]wo or three new $600,000 single family homes or condominiums built in the Bay Area in the last decade or so reduced displacement in the region by as much as building a new subsidized unit…. In addition to effectiveness, we also have to consider cost. ...building subsidizing housing is hugely expensive for the public sector.” City Observatory’s "The End of the Housing Supply Debate-Maybe“
      • “Building 100 new market-rate units leads 45-70 and 17-39 people to move out of below-median and bottom-quintile income tracts, respectively, with almost all of the effect occurring within five years. This suggests that new construction reduces demand and loosens the housing market in low- and middle-income areas, even in the short run.” (Upjohn, 2019)

* https://www.hawaiipublicradio.org/local-news/2020-03-06/ban-foreign-buyers-from-hawaii-real-estate
The more residential units, the more property tax revenue.

Figure 7: Utah Foundation Analysis of Property Tax Receipts and Housing Units by Study Area Parcels, with Trendlines, Utah County

Source: The Utah Foundation, 2022.