

density



strategic growth

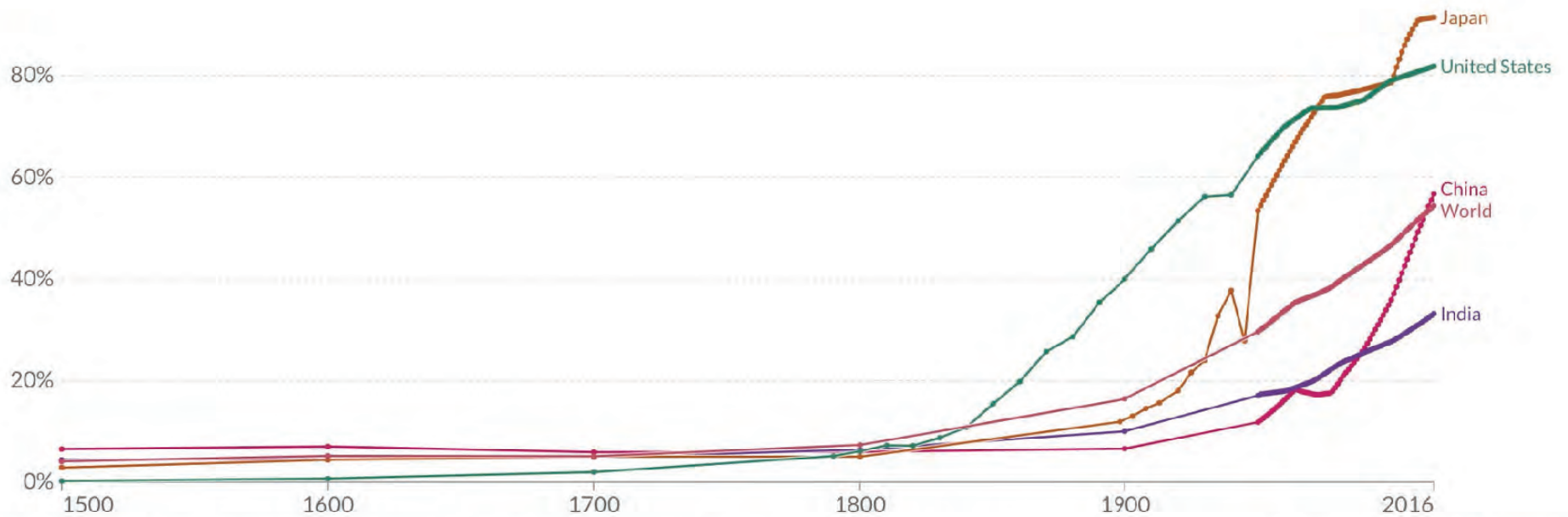
juanmullerat

plusurbia.

URBANIZATION

1500-2016

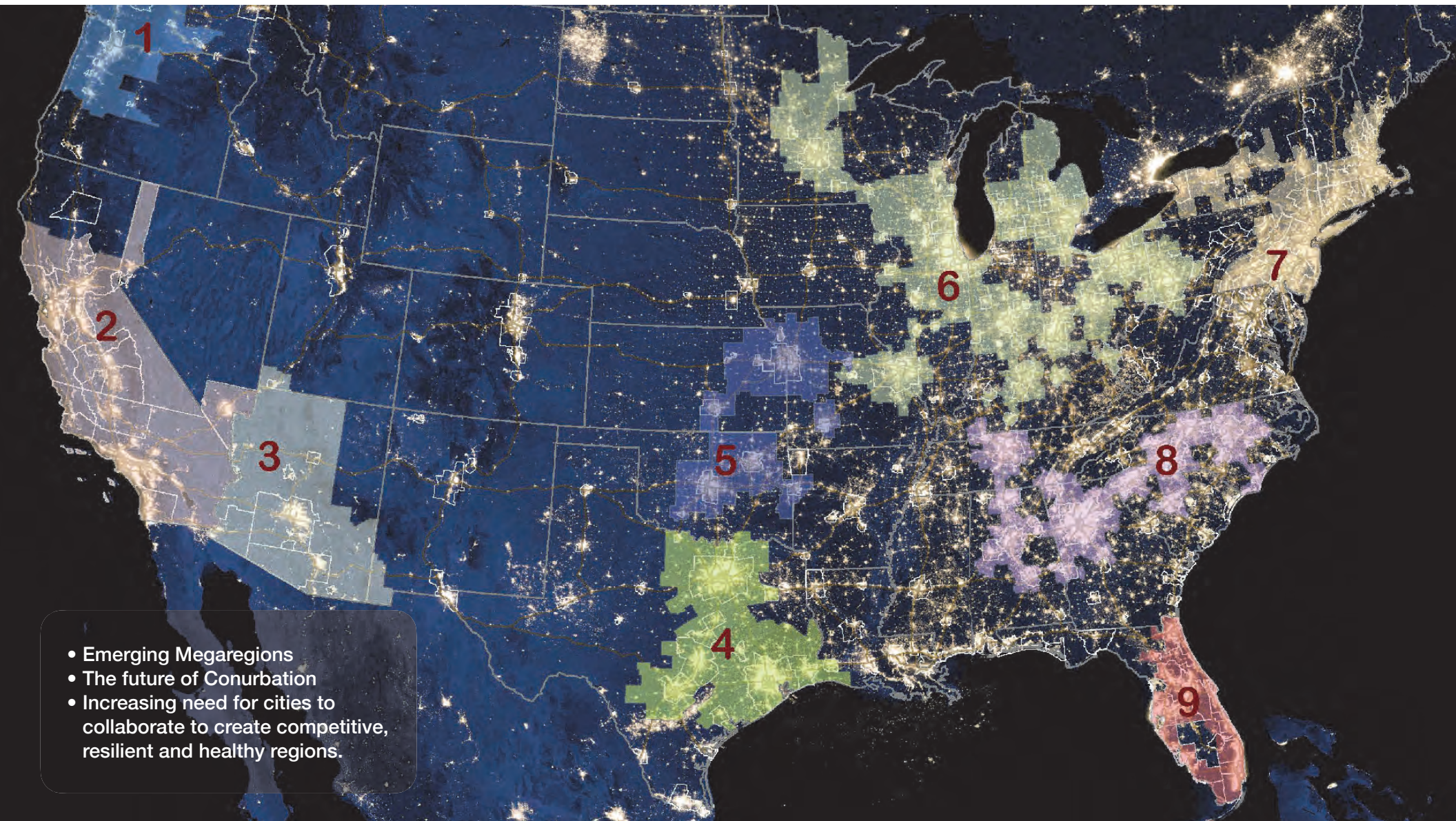
Our World
in Data



Source: Our World in Data based on UN World Urbanization Prospects 2018 and historical sources (see Sources)
Note: Urbanization rates are based on national definitions and may vary by country.

OurWorldInData.org/urbanization

2016 C BY





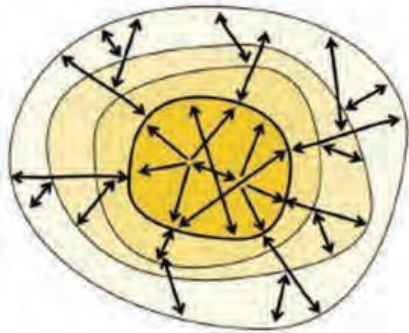
THE METROAREAS MEGALOPOLIS

- Florida's unique geography
- Unique coastal growth and pressure to invade protected habitats
- Critical connectivity throughout regions to alleviate pressure on roads
- As cities grow, coordinated development regulatory strategies are necessary to address morphological adjacencies with neighboring cities?

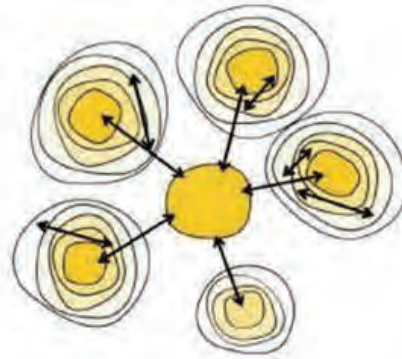


- Large human settlements.
- Defined as permanent and densely settled places with boundaries.
- Cities are generally integrated systems
- Their density facilitates interaction between people, government organizations, and businesses,
- improving the efficiency of goods and service distribution.

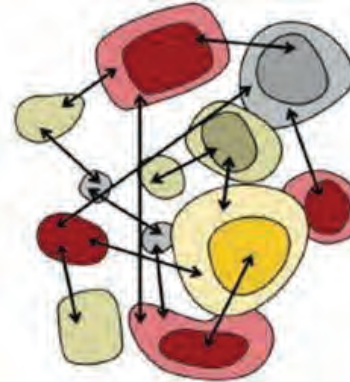
THE CITY



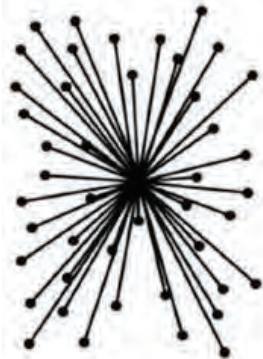
Monocentric city



Polycentric city cluster with "satellite centres"



Network city



Centralized structure



De-centralized structure



Distributed structure




Hybrid structure

- The arrangement of land use in urban areas, or how a city's land use is laid out, is known as urban structure.
- Several theories have been developed by urban planners, economists, and geographers.
- From monocentric to network cities and related urban structures (Lehman 2012, 10)
- How we grow is a function of priority.
- Competitiveness will result in our ability to apply the right growth management at different scales

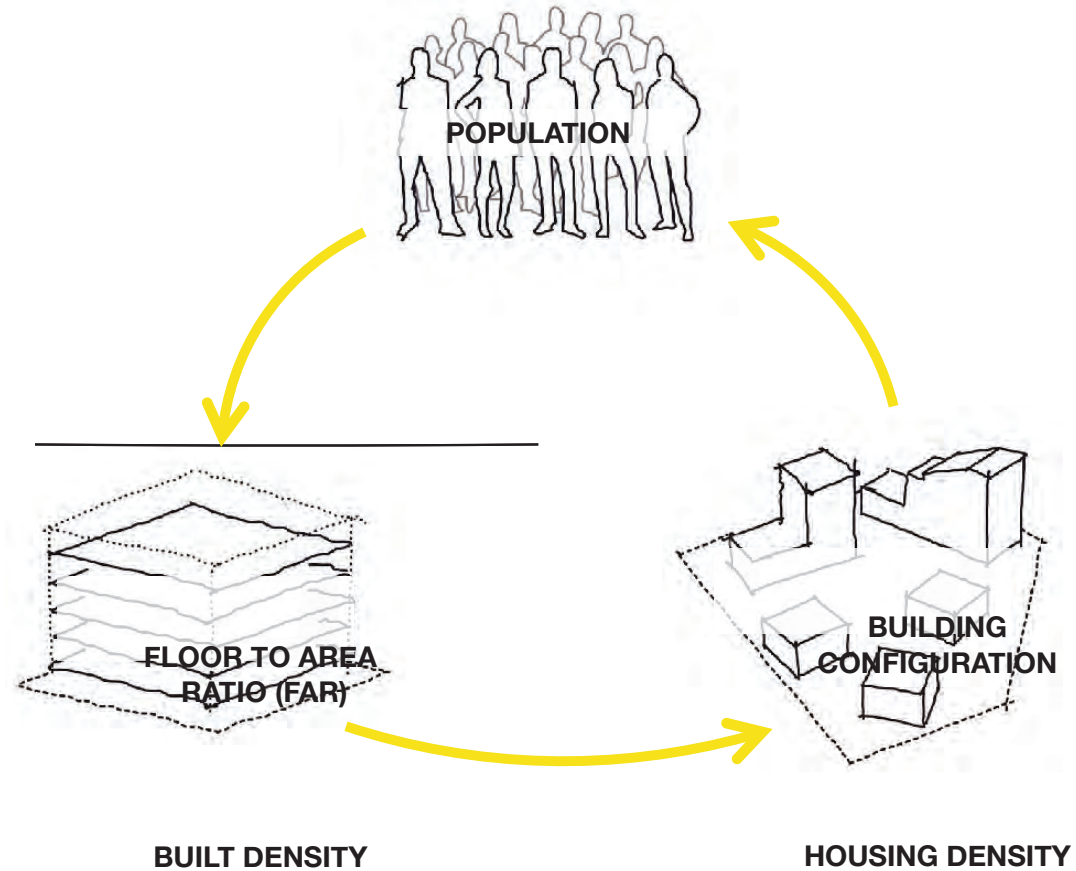


- It is not easy to visualize density
- Consider how we communicate development patterns: Land area — FARs — people x DU — DUA
- Visualizing density and growth patterns allows us to effectively communicate change and growth

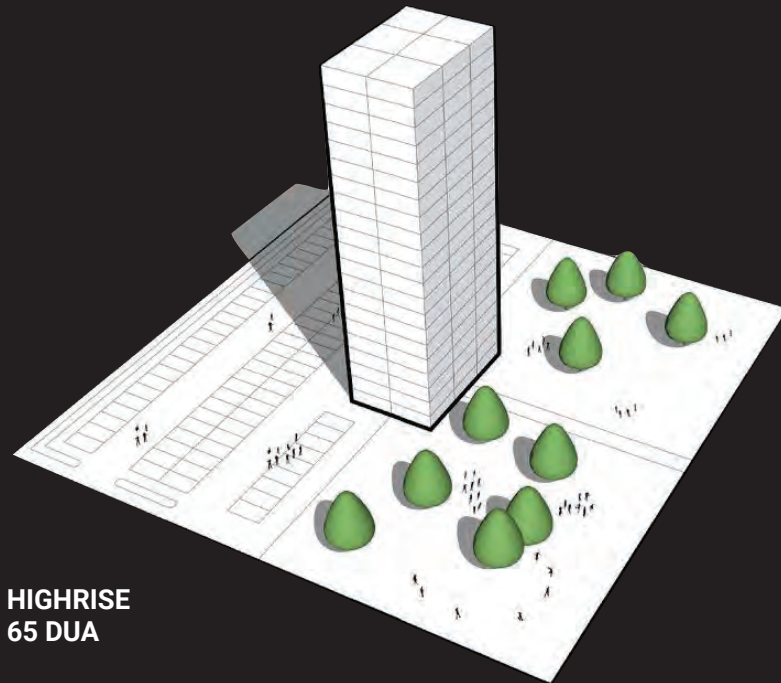
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- Florida's population increased by 1.9% to 22,244,823 between 2021 and 2022 (318,855)
 - ABOUT 500 PEOPLE X DAY are arriving to Florida
 - Considering that in 2009 50% of the world's population was urbanized, the tipping point to the urban-to-rural balance is now in the past.
 - Growth management and retaining healthy, livable standards in our cities are key to accommodating and growing in a sensible manner.

DENSITY

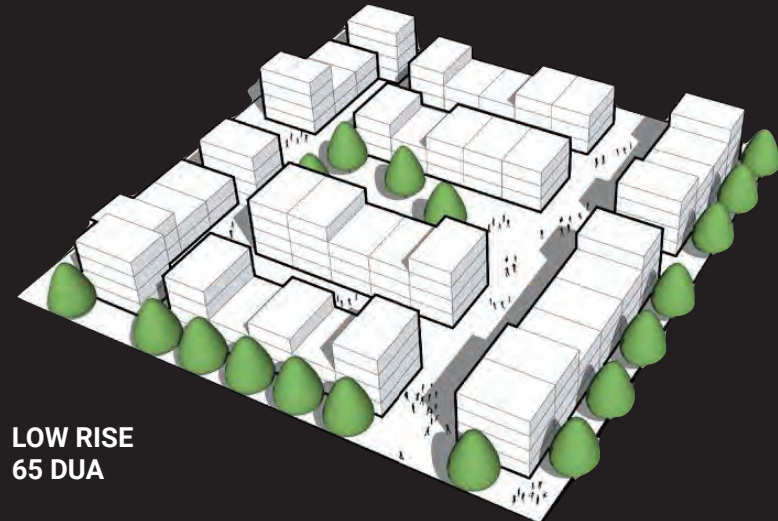
- Visualizing density and understanding how different metrics affect our building and city form is critical to our city's future.
- Built Density
- Population Density and Building Configuration



- Zoning for height did not mean more density - but
- Character change and reduced walkable environments

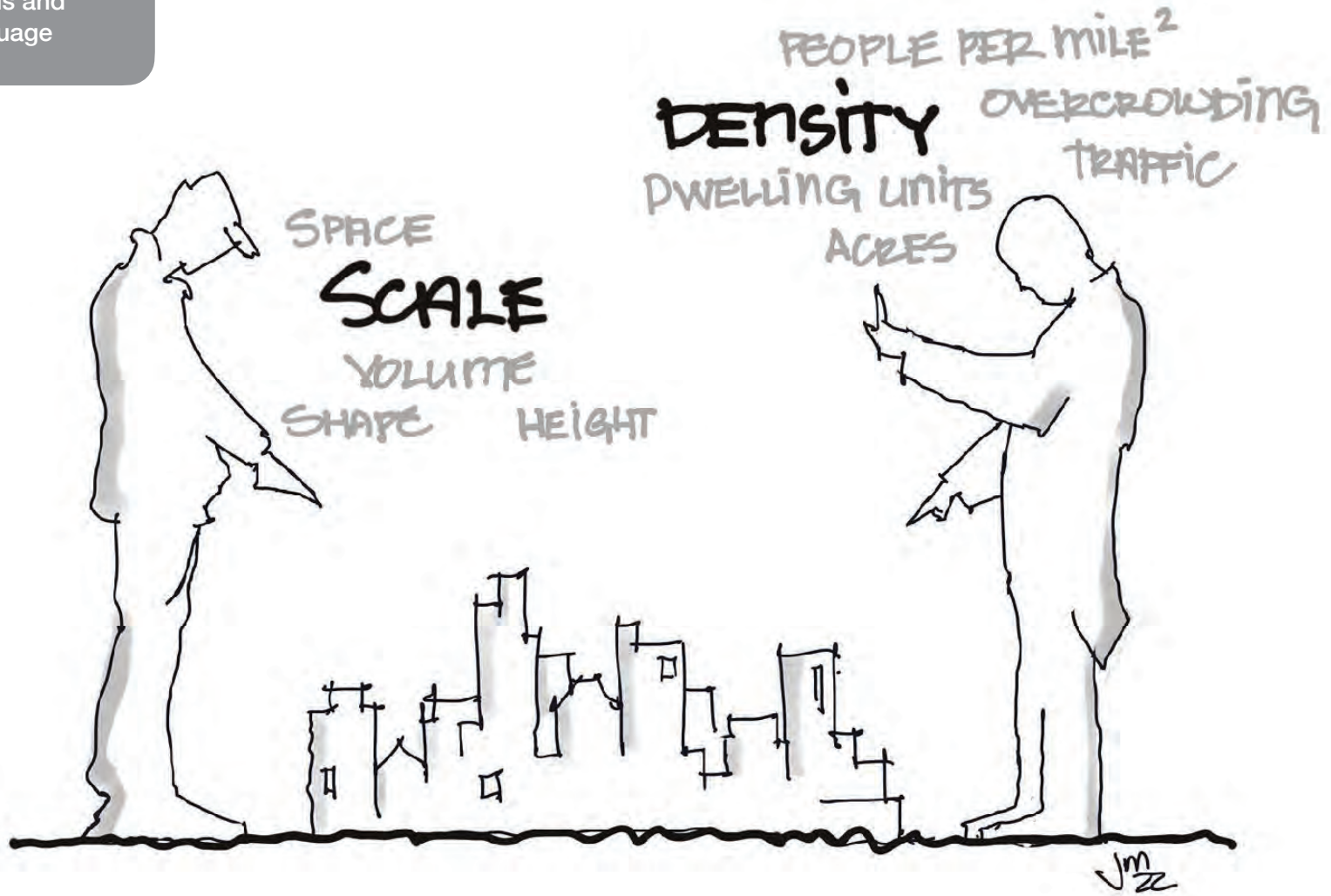


HIGHRISE
65 DUA



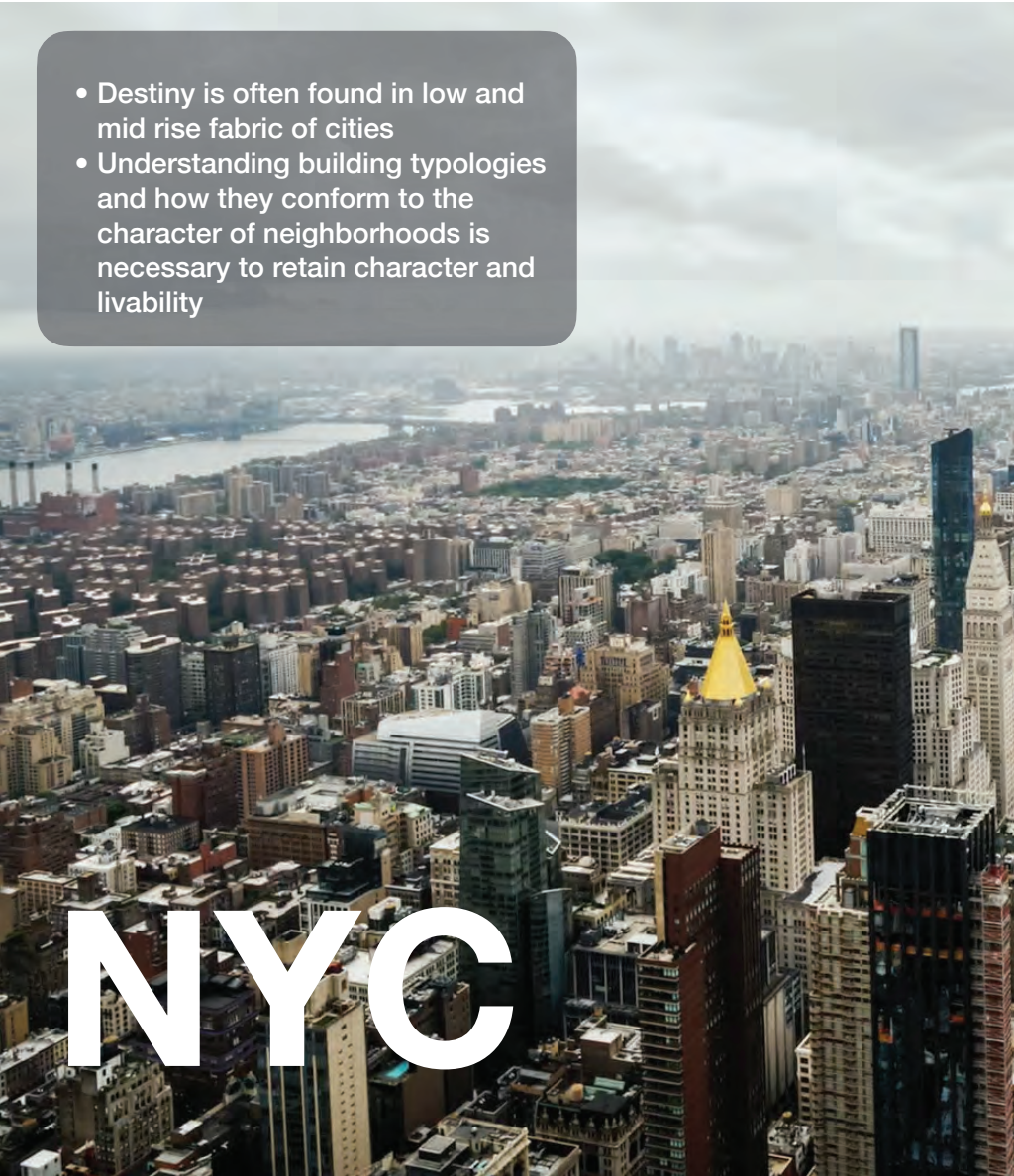
LOW RISE
65 DUA

- Effective communication starts by dispelling contradictions and finding a common language

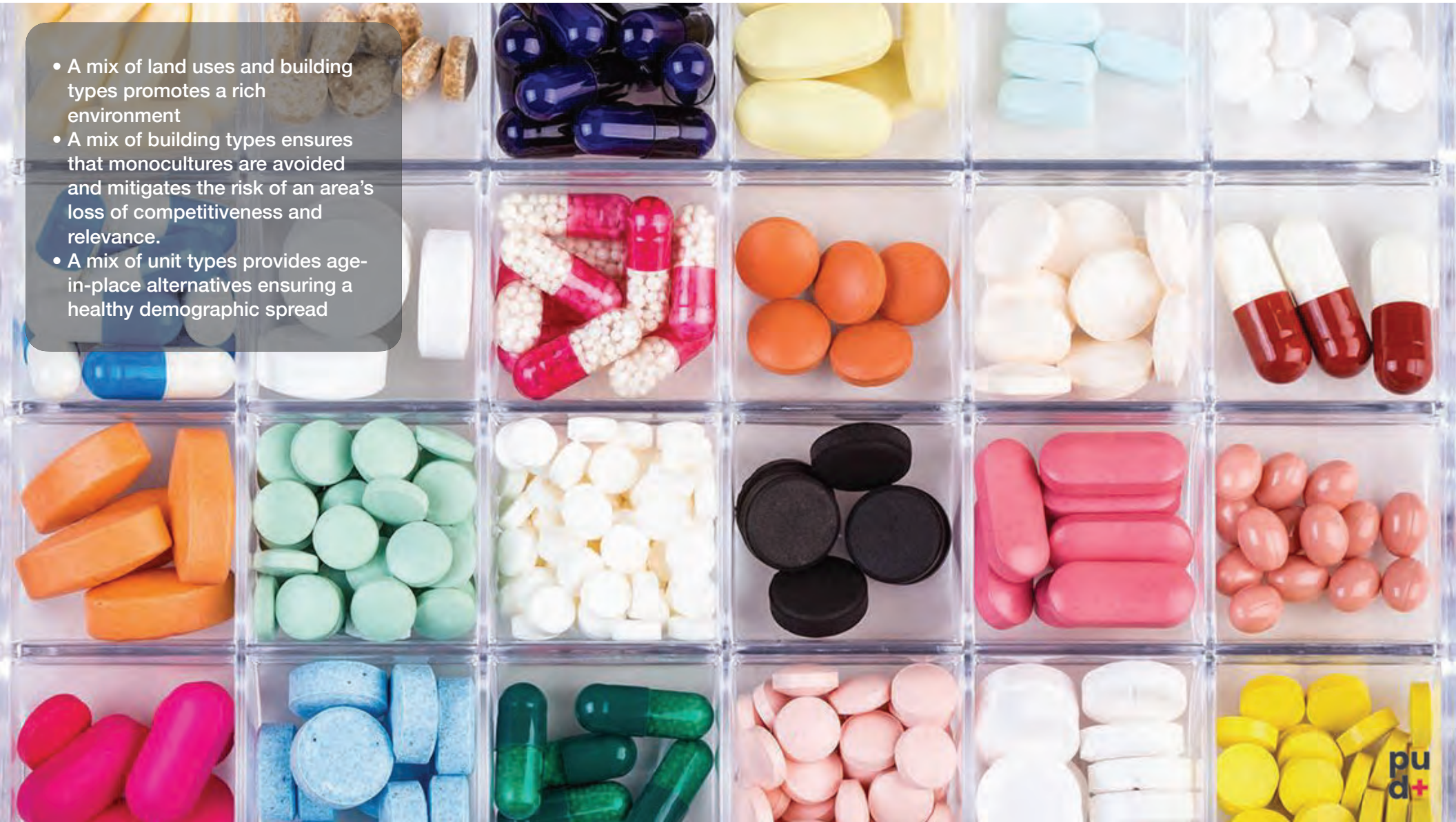


- Destiny is often found in low and mid rise fabric of cities
- Understanding building typologies and how they conform to the character of neighborhoods is necessary to retain character and livability

NYC



- A mix of land uses and building types promotes a rich environment
- A mix of building types ensures that monocultures are avoided and mitigates the risk of an area's loss of competitiveness and relevance.
- A mix of unit types provides age-in-place alternatives ensuring a healthy demographic spread

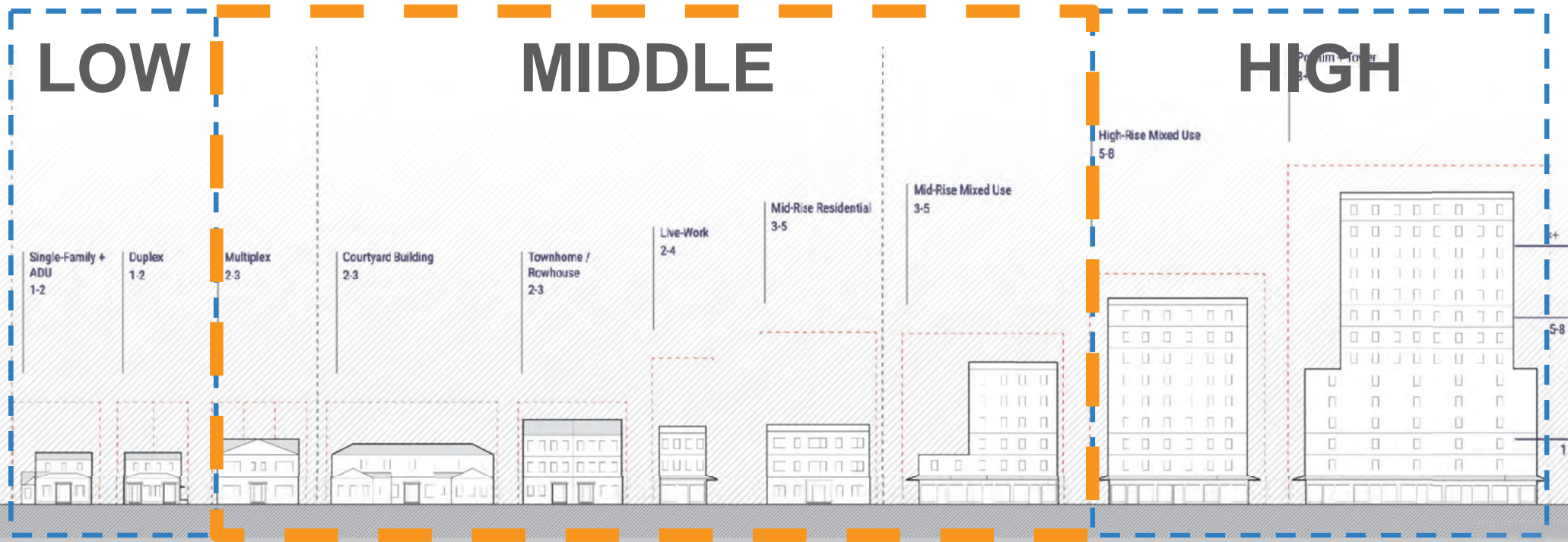


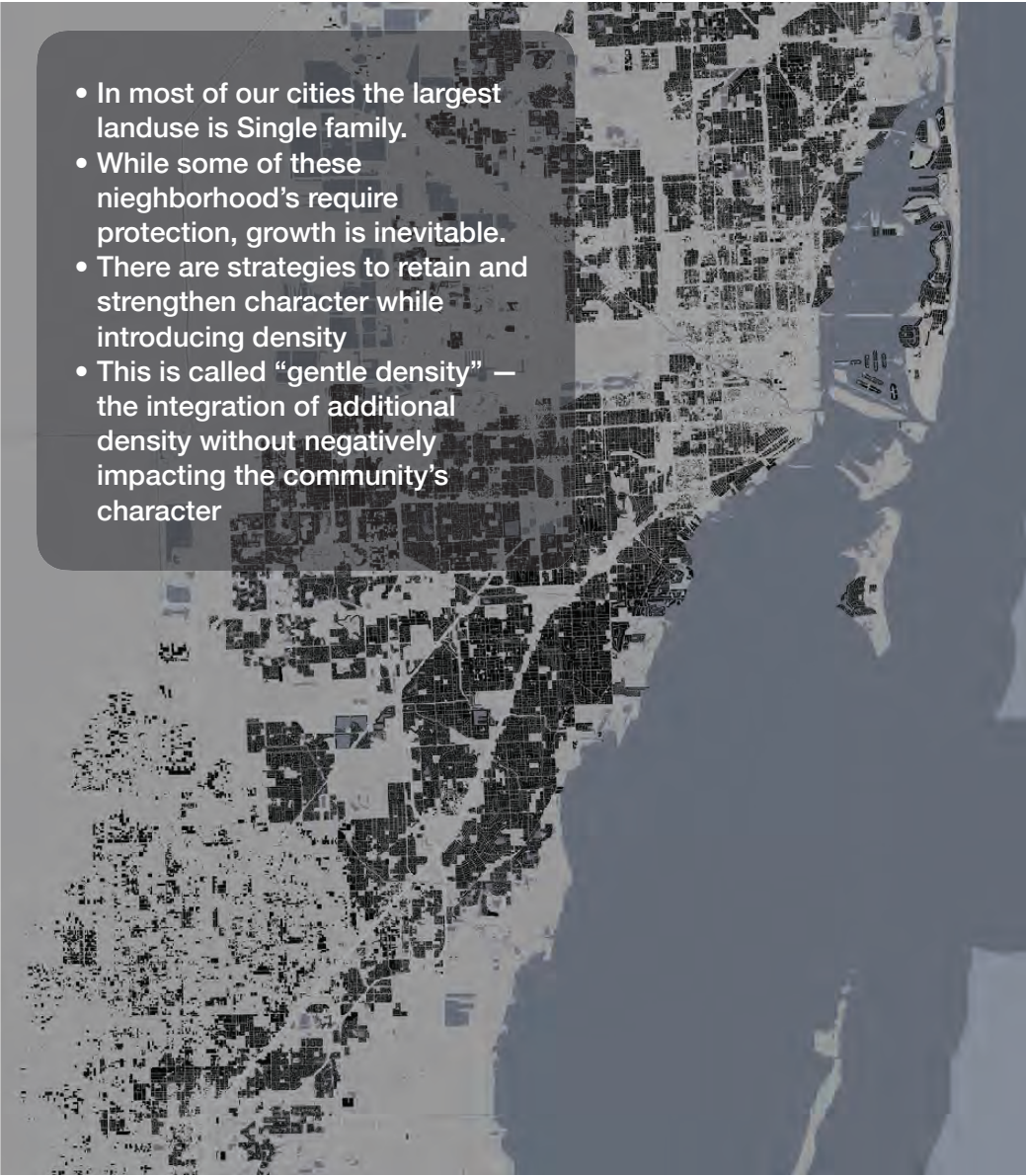
BUILDING MORPHOLOGY

- Land thirsty
- Low density
- Push residents to suburbs
- Costly

- Land efficient - rarely requires land assembly
- Fits in existing low-scale areas
- Low to no subsidies
- Empower property owners to be small scale developers

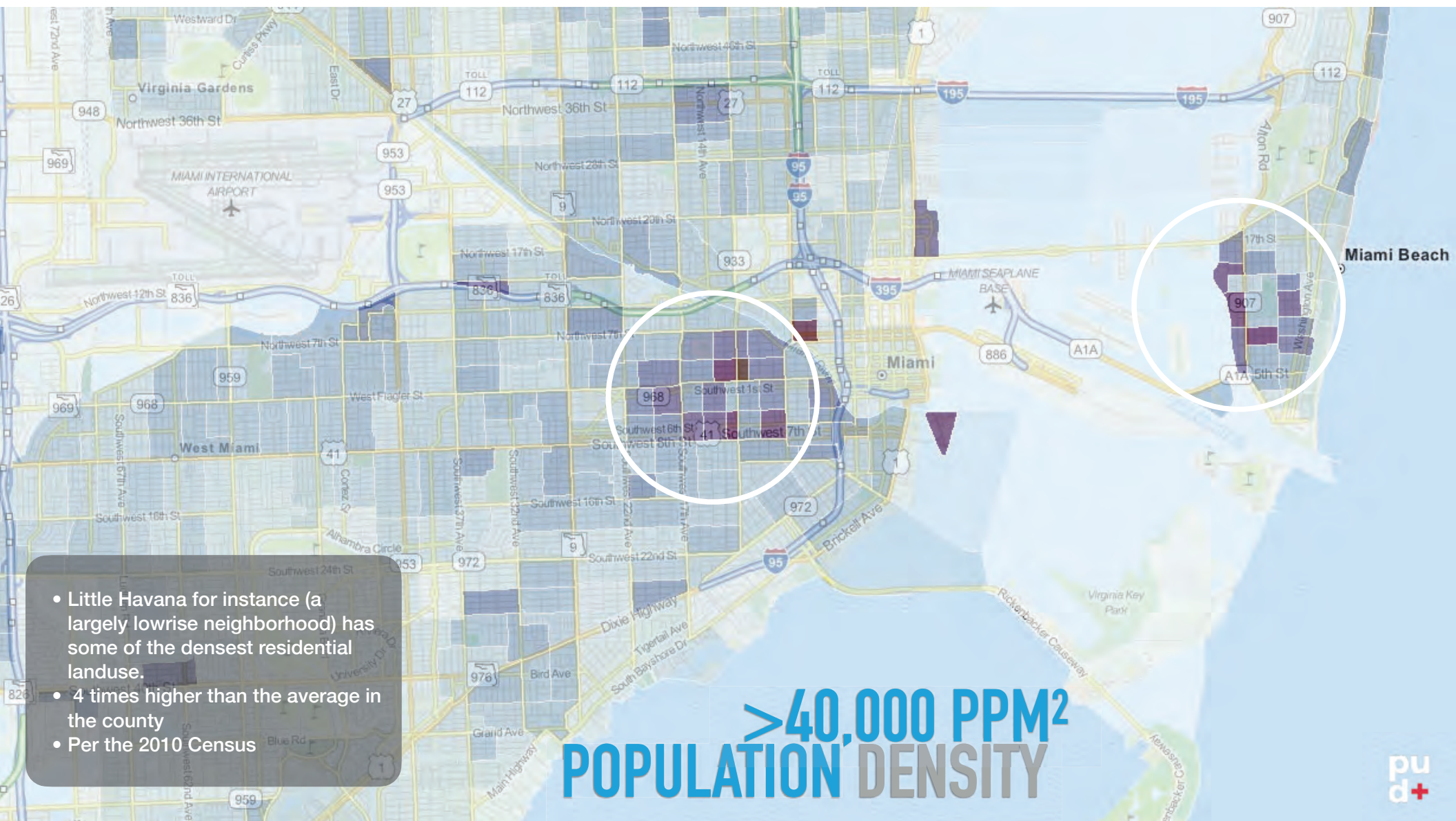
- Land thirsty - requires assemblages
- Impacts existing low scale areas
- Often subsidized with LIHTC
- Costly



- 
- In most of our cities the largest landuse is Single family.
 - While some of these neighborhood's require protection, growth is inevitable.
 - There are strategies to retain and strengthen character while introducing density
 - This is called “gentle density” — the integration of additional density without negatively impacting the community's character



35%



- Little Havana for instance (a largely lowrise neighborhood) has some of the densest residential landuse.
- 4 times higher than the average in the county
- Per the 2010 Census

>40,000 PPM²
POPULATION DENSITY

- Compare the typical Miami High-rise's density with a typical Little Havana Apartment building
- The difference is not only in the unit sizes but also in the provision of parking and amenity space
- In the case of traditional neighborhoods, the amenity is provided in the public realm, strengthening the social and cultural makeup of the neighborhood.



JADE BRICKELL = 124 DUA



THE WOODWARD = 154 DUA



1920S CENTRAL CORRIDOR
DENSITY = 308 DUA (50'X150')



PA Primary Zone
6110 COMM/RESIDENTIAL-DESIGN D

Primary Land Use
0303 MULTIFAMILY 10 UNITS PLUS : MULTIFAMILY 3 OR MORE UNITS

Beds / Baths / Half	53 / 53 / 0
Floors	3
Living Units	53
Actual Area	
Living Area	
Adjusted Area	15,860 Sq.Ft
Lot Size	7,500 Sq.Ft
Year Built	1923





1920S CENTRAL HALL
DENSITY = 308 DUA (50'X150')

1970S SIDE CORRIDOR
DENSITY = 35 DUA (50'X150')



PHILADELPHIA, PA
52 DUA



PHILADELPHIA, PA
52 DUA





Alamo Square
Playground

SAN FRANCISCO, CA
80 DUA





SAN FRANCISCO, CA
80 DUA





SHENANDOA MIAMI
24 DUA

Google

© 2018 Plusurbia Design



SHENANDOA MIAMI
24 DUA





12

1

1

1

1

2

1

1

1

1

1

2

9

3

4

2

2

18

1

2

1

1

2

1

1

HOUSING MIX (T3)

39 APARTMENT UNITS

5 SINGLE FAMILY

5 DUPLEX

16 ADU

DENSITY: 50 DUA

Cuban Memorial Boulevard Park

Narrow grassy area with small monuments

Jose Marti Memorial



9

5

4

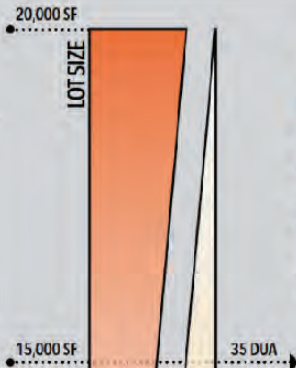
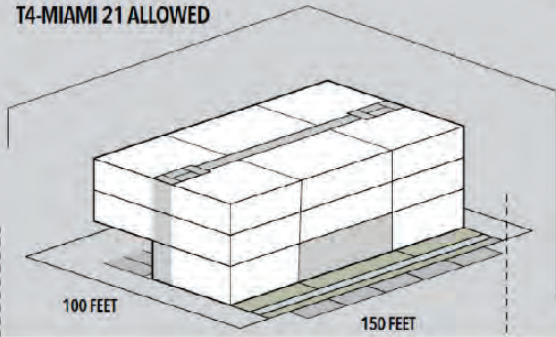
3

- Parking thirsty zoning regulations
- Visualizing space
- Compare 1 BD apartment to 1.5 parking spaces
- Require retrofittable/adaptable parking structures
- Consider affordability carrying parking costs to tenants.
- Recommend market-driven parking standards



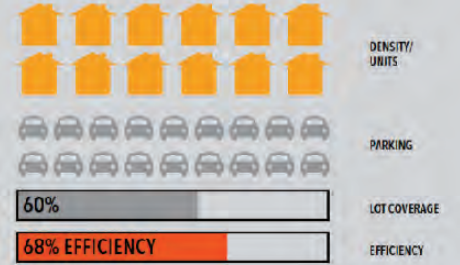
EXISTING

T4-MIAMI 21 ALLOWED

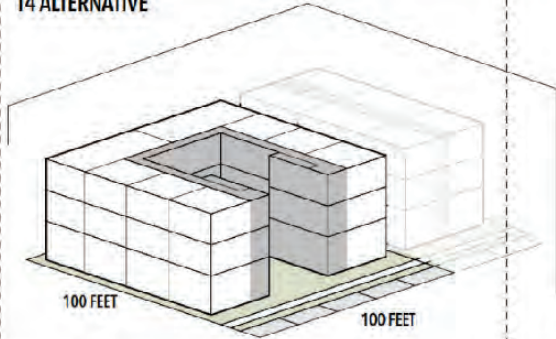


EXISTING LOT SIZE 15,000 SF

UNITS: 12
 MAX. # OF FLOORS: 3
 DENSITY: 35 DUA (36 DUA allowed)
 AVG. UNIT SIZE: 1,438 SF
 EFFICIENCY: 68%
 PARKING PROVIDED: 17
 (1.5 per DU)

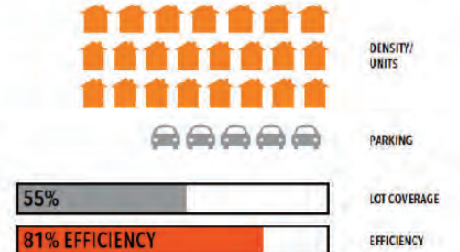


T4 ALTERNATIVE

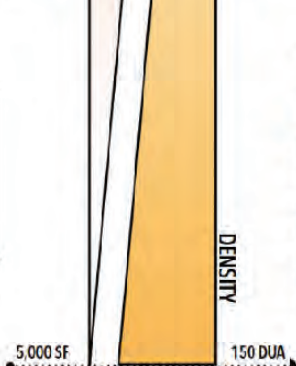
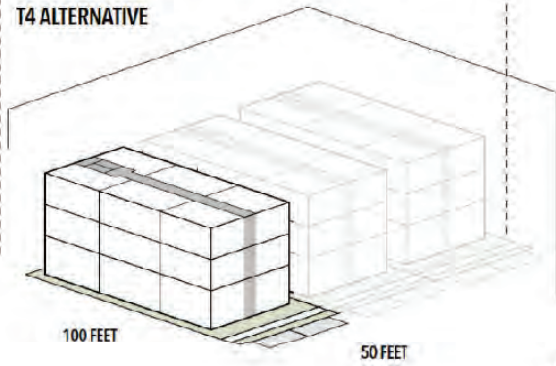


ALTERNATIVE LOT SIZE 10,000 SF

UNITS: 23
 MAX. # OF FLOORS: 3
 DENSITY: 100 DUA
 AVG. UNIT SIZE: 587 SF
 EFFICIENCY: 81%
 PARKING PROVIDED: 5
 (assuming buy down option)

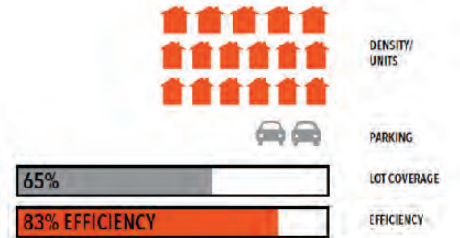


T4 ALTERNATIVE



ALTERNATIVE LOT SIZE 5,000 SF

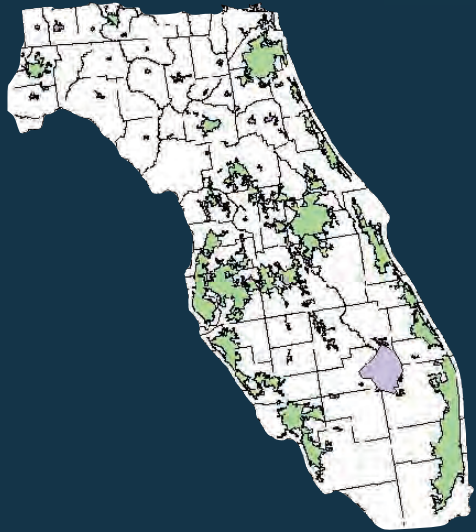
UNITS: 17
 MAX. # OF FLOORS: 3
 DENSITY: 150 DUA
 AVG. UNIT SIZE: 495 SF
 EFFICIENCY: 83%
 PARKING PROVIDED: 2
 (assuming buy down option, or removing parking requirements)



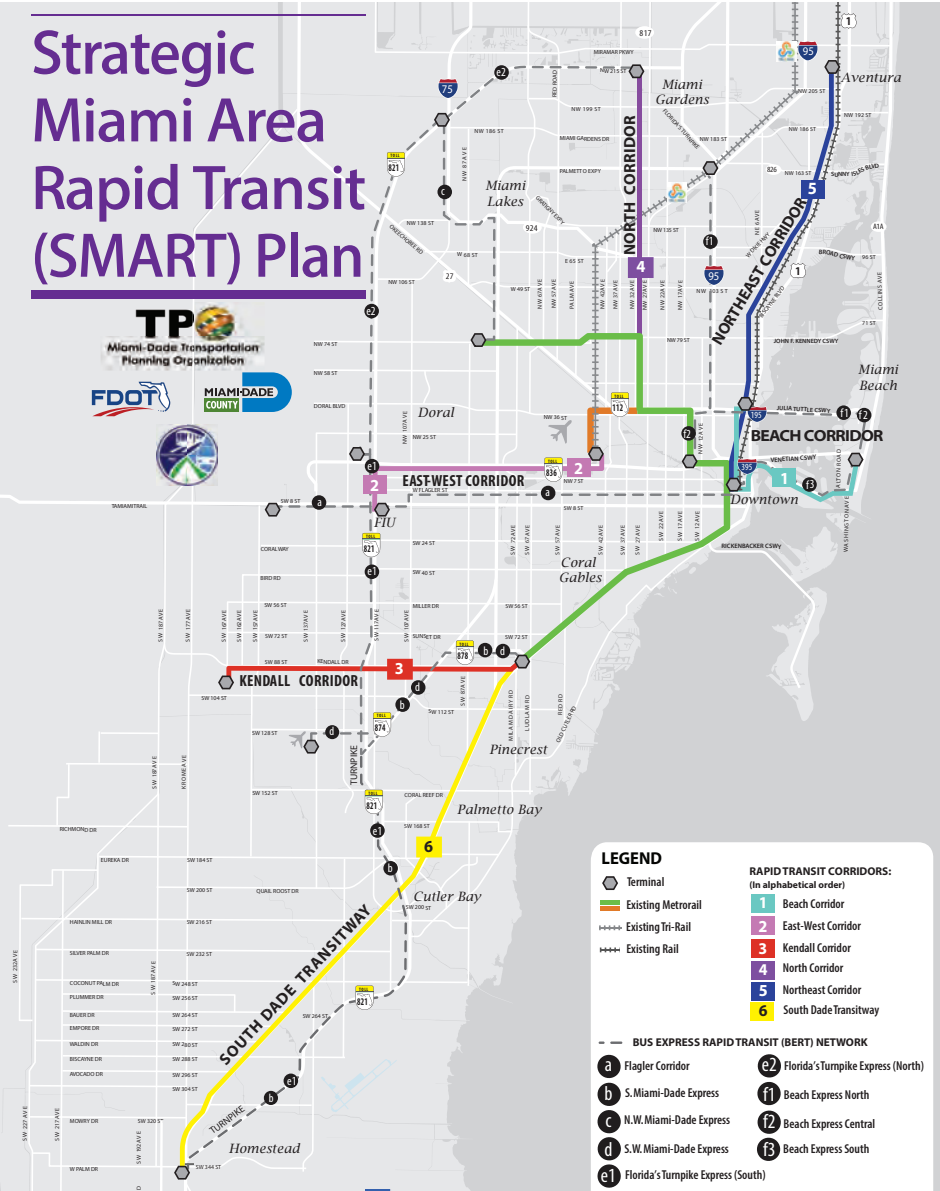
PROPOSED



Mobility



Strategic Miami Area Rapid Transit (SMART) Plan



TRANSIT ORIENTED DEVELOPMENT PRINCIPLES



CONNECTIVITY



MOBILITY



PUBLIC SPACES



DIVERSITY

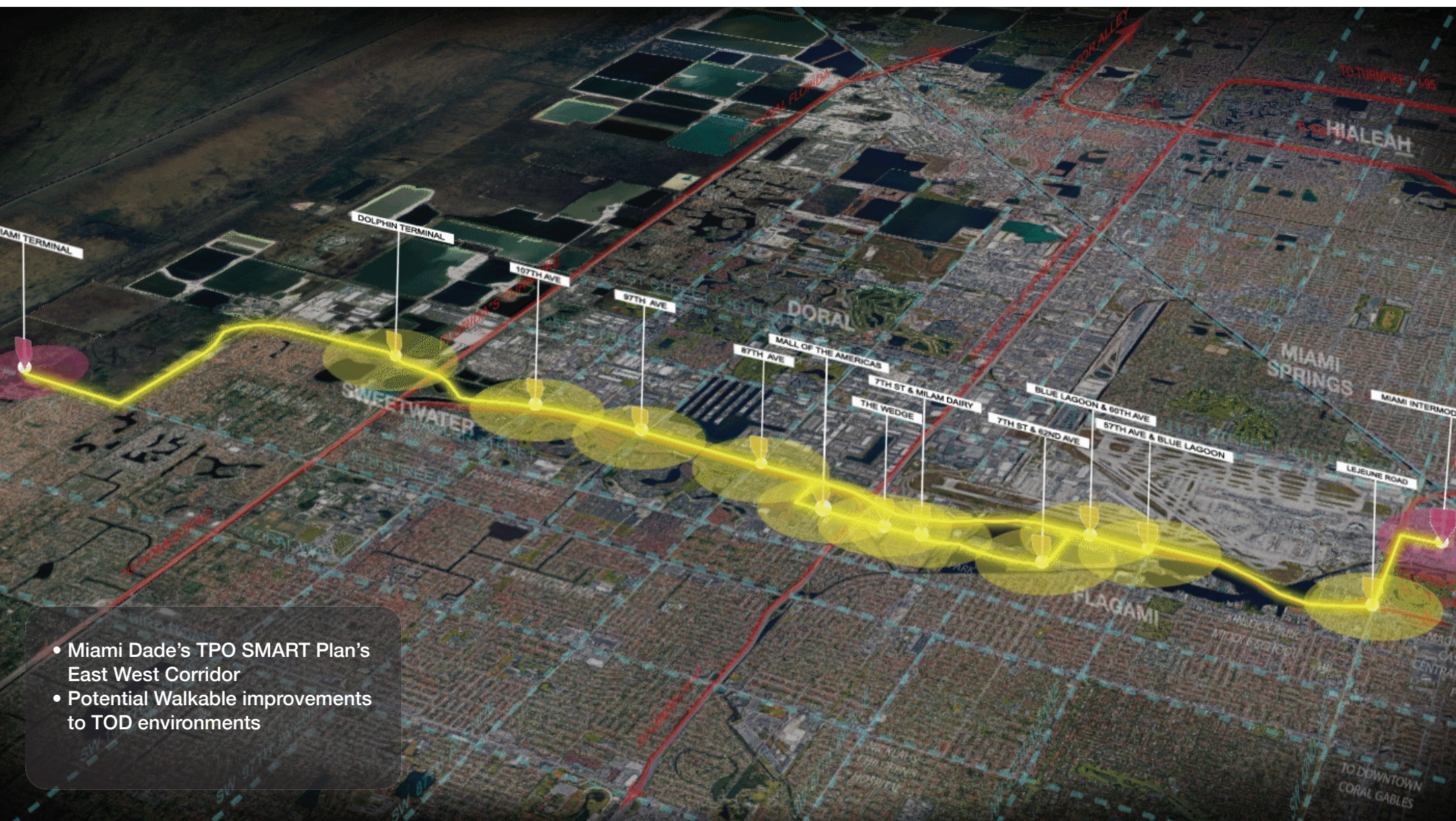


DENSITY



TYOLOGY





- Miami Dade's TPO SMART Plan's East West Corridor
- Potential Walkable improvements to TOD environments



BLUE LAGOON STATION

MIAMI, FL

05.23.2020

SCALE 1/4"



LAND USE	ACRES	% TOTAL
Single-Family	2390.77	46.6%
Two-Family Duplexes	404.76	7.9%
Townhouses	32.24	0.6%
Low-Density Multi-Family	239.62	4.7%
High-Density Multi-Family	316.15	6.2%
Residential-Government Owned Housing	30.71	0.6%
Commercial	351.34	6.9%
Office	246.01	4.8%
Mixed Use - Business / Residential	40.31	0.8%
Institutional	614.57	12.0%
Industrial	33.64	0.7%
Communications, Utilities, Terminals	66.17	1.3%
Parks, Preserves, Conservation Areas	228.41	4.5%
Vacant	131.95	2.6%

Table: Land Use Classification by County in Florida, 2010. (source: Miami Dade ArcGIS)

- Metro rail <30% utilization
- Potential to influence 1st and last mile and reduce the 78,000 AADT count on US1.
- 46.6% of area is SF Landuse
- Average of 10 DUA
- arguably minimum transit supportive 46 DUA

While the Underline Corridor has been the historical urban spine of the County, residential development remains mostly low density with **multifamily uses** accounting for **less than 11%** of the land along the corridor.



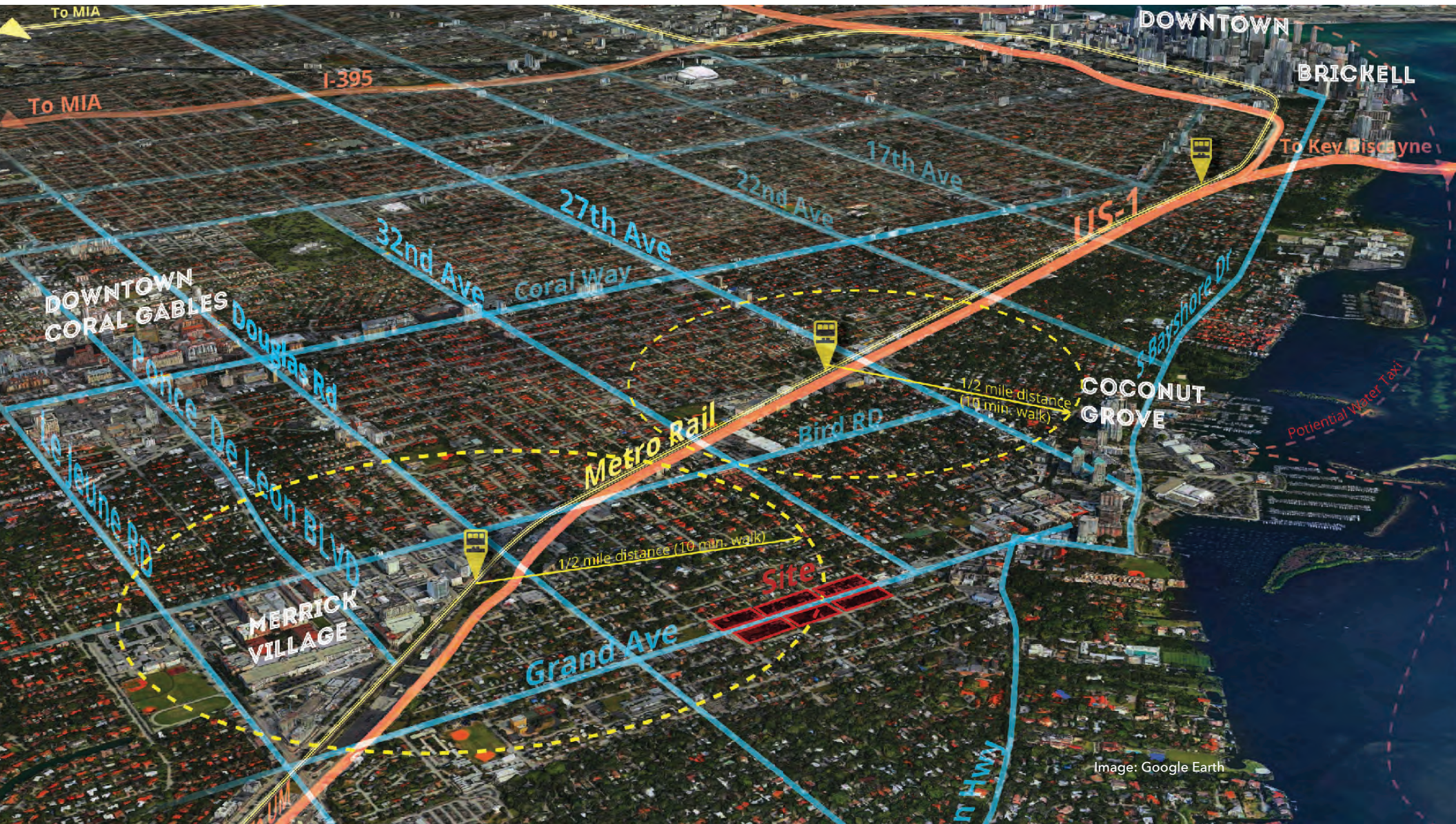
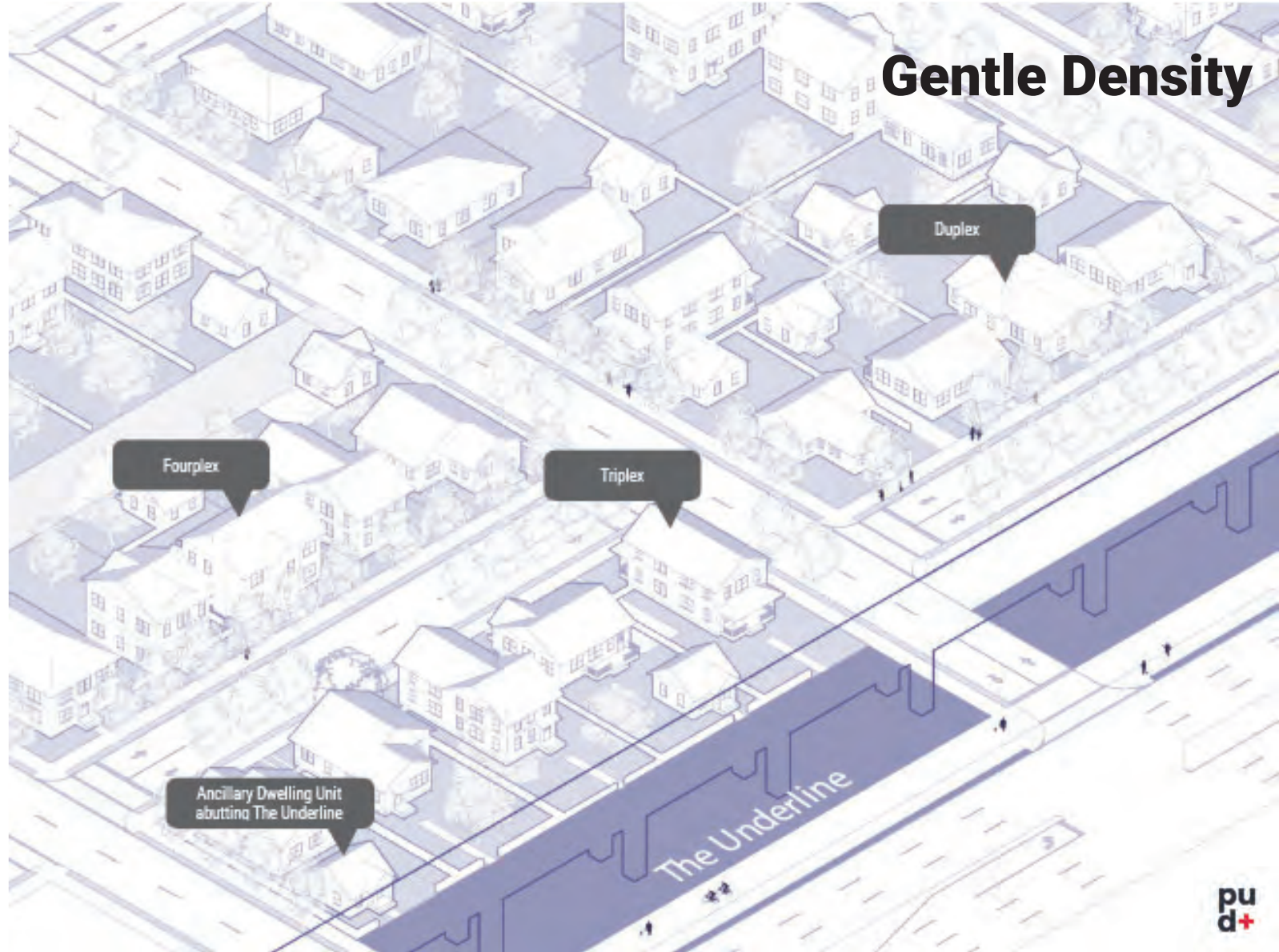
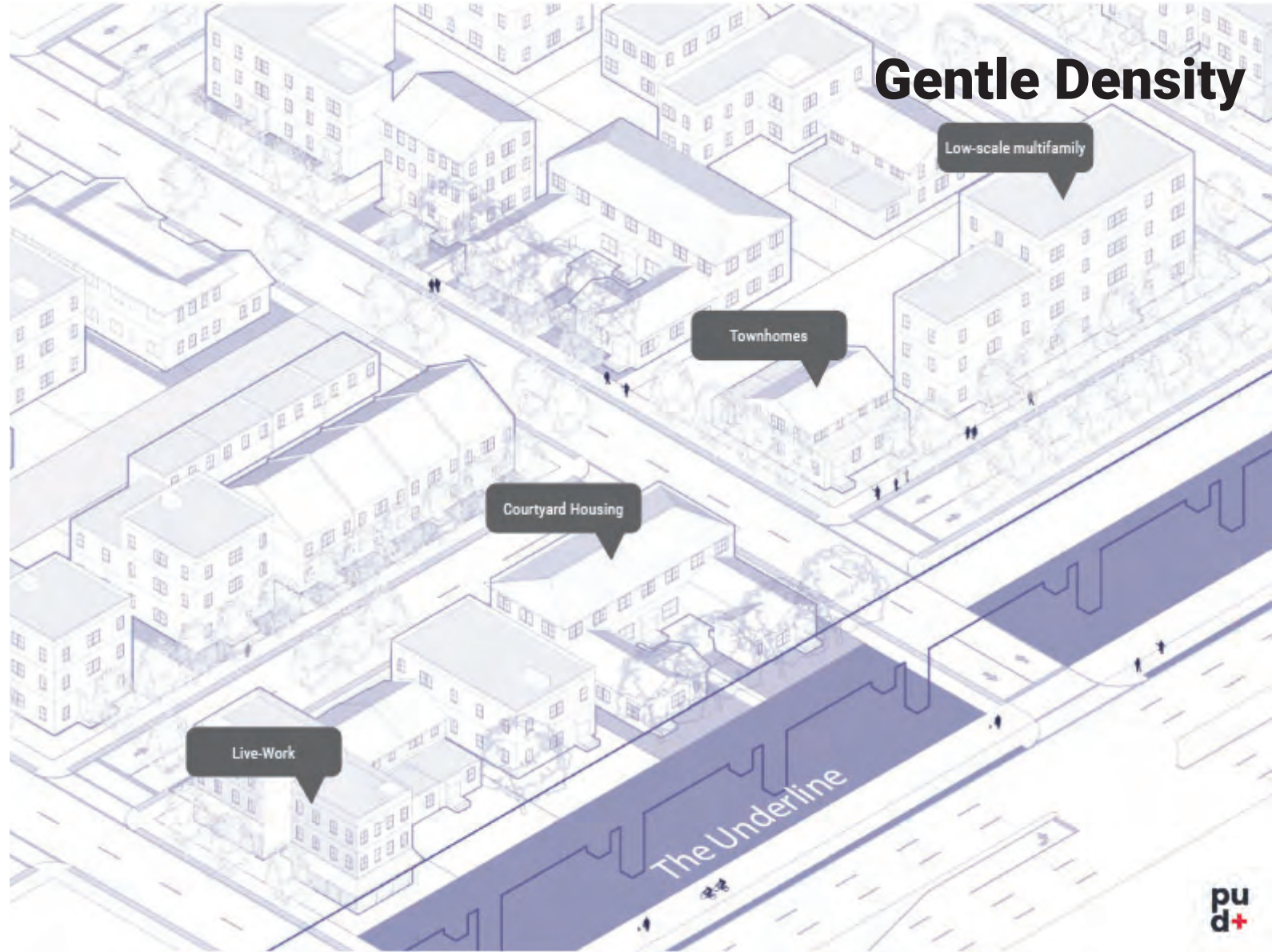
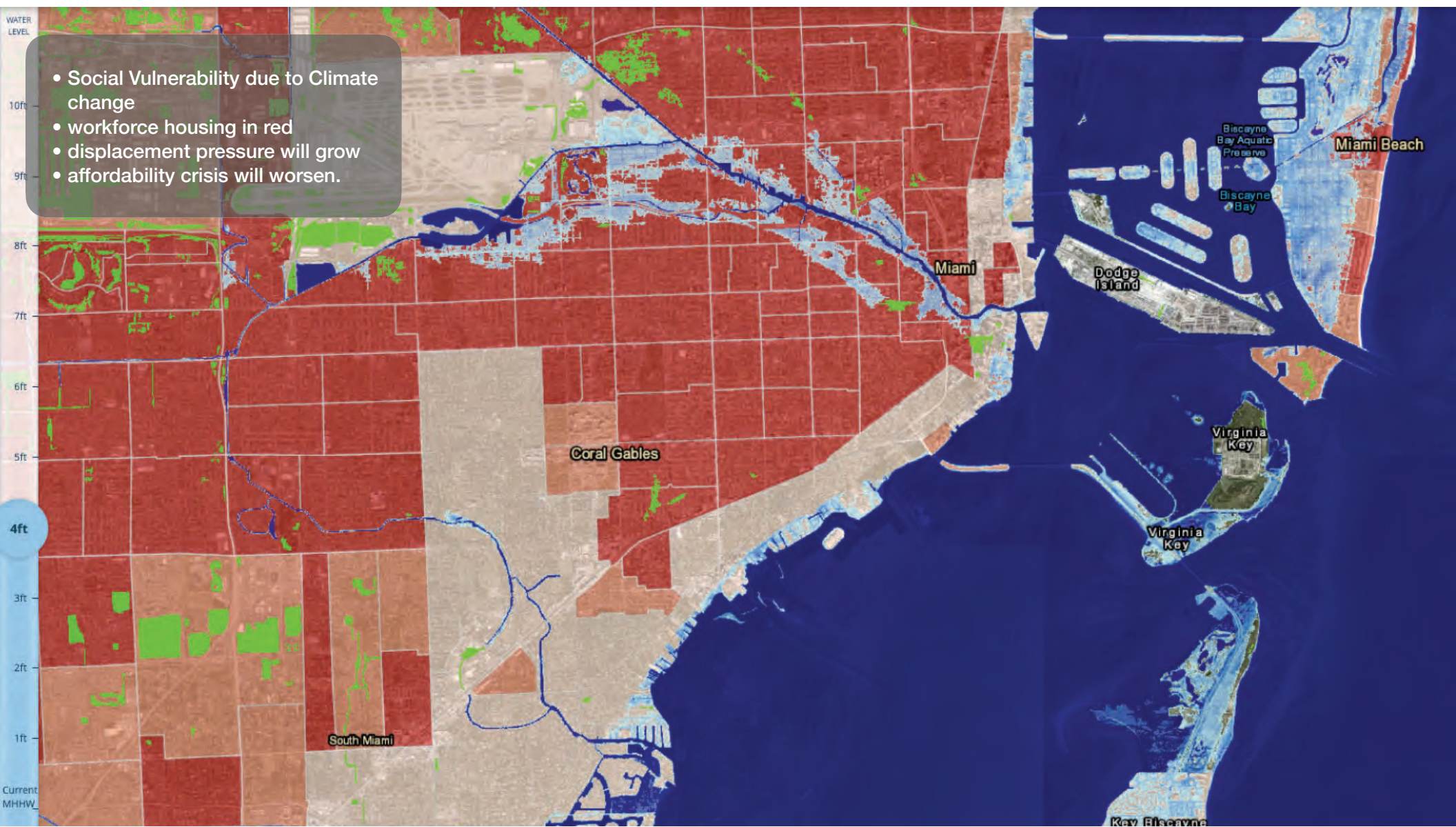



Image: Google Earth





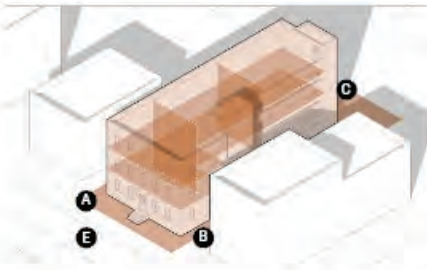


- Social Vulnerability due to Climate change
- workforce housing in red
- displacement pressure will grow
- affordability crisis will worsen.

- 
- Vulnerable communities with the highest redevelopment pressure are mostly low-rise, and single-family land uses.
 - At the core of our real estate system where Development rewards low risk and high return.
 - Vulnerable areas become the perfect target requiring less upfront capital.
 - Targeting existing workforce communities where disinvestment has created a depreciated market.
 - The result is a reduction of housing for mid and low-income families and displacement.
 - Adding climate gentrification = lower income areas become high-income development that produces housing product that minimizes their absorption risk by targeting the top 20%.

50'X125' - EXAMPLE

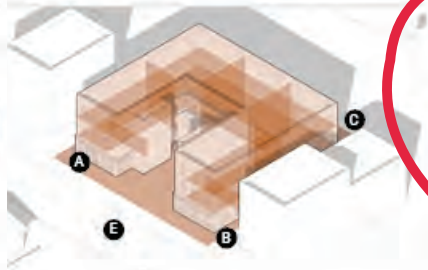
One structure with three stories and nine dwelling units that occupies a single lot.



Lot Size	6,250 sq. ft.	Density	72 du/ac
Bldg Footprint	3,300 sq. ft.	Unit Count	9 du
Bldg Area	10,000 sq. ft.	Unit Size	750-1000 sq. ft.
Lot Coverage	53%	Affordability	2 du @ 80%
Front Setback	10 feet	Commercial	N/A
Side Setback	5 feet	Parking	TOD: waived TC: waived
Rear Setback	20 feet		
Bldg Height	2 story		

100'X100' - EXAMPLE

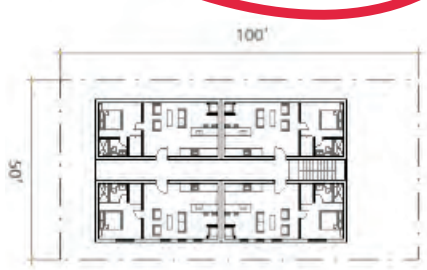
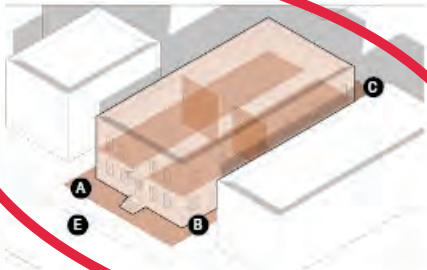
One structure with three stories and fifteen dwelling units that occupies a single lot.



Lot Size	10,000 sq. ft.	Density	72 du/ac
Bldg Footprint	5,300 sq. ft.	Unit Count	15 du
Bldg Area	15,000 sq. ft.	Unit Size	850-950 sq. ft.
Lot Coverage	53%	Affordability	3 du @ 80%
Front Setback	10 feet	Commercial	N/A
Side Setback	5 feet	Parking	TOD: waived TC: waived
Rear Setback	20 feet		
Bldg Height	3 stories		

50'X100' - EXAMPLE

One structure with two stories (three allowed) and eight dwelling units that occupies a single lot.



Lot Size	5,000 sq. ft.	Density	72 du/ac
Bldg Footprint	2,800 sq. ft.	Unit Count	8 du
Bldg Area	5,600 sq. ft.	Unit Size	600 sq. ft.
Lot Coverage	56%	Affordability	2 du
Front Setback	10 feet	Commercial	N/A
Side Setback	5 feet	Parking	TOD: waived TC: waived
Rear Setback	20 feet		
Bldg Height	2 story		

	25% AFFORDABLE 80% AMI	25% AFFORDABLE 60% AMI	50% SUBSIDIZED 60% AND BELOW	50% WITH LAND 60% AND BELOW
DEVELOPMENT PROFILE				
Total Units	8	8	8	8
Affordable Units	2	2	4	4
DEVELOPMENT				
Land Acquisition	\$500,000	\$500,000	\$500,000	\$500,000
Construction	\$1,029,000	\$1,029,000	\$1,029,000	\$1,029,000
Soft Costs	\$468,878	\$468,878	\$468,878	\$468,878
Total Project Cost	\$1,997,878	\$1,997,878	\$1,997,878	\$1,997,878
Cost per Unit	\$249,735	\$249,735	\$249,735	\$249,735
OPERATING BUDGET				
Revenue	\$156,843	\$149,254	\$122,202	\$122,202
Expense	\$46,298	\$46,298	\$38,340	\$46,298
Net Operating Income	\$110,545	\$102,956	\$83,862	\$75,904
RESERVES AND DEBT				
Replacement Reserve	\$4,000	\$4,000	\$4,000	\$4,000
Operating Reserve	\$2,315	\$2,315	\$1,917	\$2,315
Debt Service	\$83,655	\$83,655	\$83,655	\$83,655
Year 1 Net Cashflow	\$20,575	\$12,986	\$(5,710)	\$(14,066)
DEBT SERVICE				
Loan to Value	65%	65%	65%	65%
Loan Amount	\$1,298,621	\$1,298,621	\$1,298,621	\$1,298,621
Interest Rate	5.00%	5.00%	5.00%	5.00%
Annual Debt Service	\$83,655	\$83,655	\$83,655	\$83,655
CAPITAL STACK				
Debt	\$1,298,621	\$1,298,621	\$1,298,621	\$1,298,621
Impact Fee Waiver	\$32,065	\$32,065	\$64,131	\$64,131
CRA Grant	\$0	\$50,000	\$300,000	\$0
Other Assistance	\$0	\$0	\$0	\$0
Land Equity	\$0	\$0	\$0	\$500,000
Owner Equity	\$667,192	\$617,192	\$335,127	\$135,127
TAX INCREMENT RECAPTURE	\$0	\$100,502	\$81,863	\$0
INTERNAL RATE OF RETURN	11.2%	10.2%	8.9%	12.3%
Fiscal Impact				
Incentives	\$32,065	\$182,567	\$445,993	
20-Year TIF to CRA	\$324,226	\$301,969	\$245,966	





- Pairing transportation with a healthy mix of housing, landuses and building types
- At regional, metro and local level
- Create a variety of density building types with competitive nodes
- Reduce traffic by providing landuse adjacency
- Support existing character and strengthen identity



end

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