REIMAGING AGING CORRIDORS

Form-Based Tools for Corridor Transformation

EP★TX 2022



Jayashree Narayana, AICP

jay@livableplans.com

Michael Huston, Architect/LEED-AP

mh@civicplanstudio.com

This is the post-conference version of the presentation that was delivered at the annual conference of the Texas Chapter of the American Planning Association in October 2022. Additional annotations have been added in the green squares. A few slides have been omitted or revised for clarity. Please contact us if you have questions!

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Partnership between Jayashree Narayana & Michael Huston

We do:

- Form-Based Codes
- Master Plans (downtowns & greenfield sites)
- Corridor Plans
- Transit-Oriented
 Development (T.O.D.)
- Conceptual building design



LEARNING OBJECTIVES:

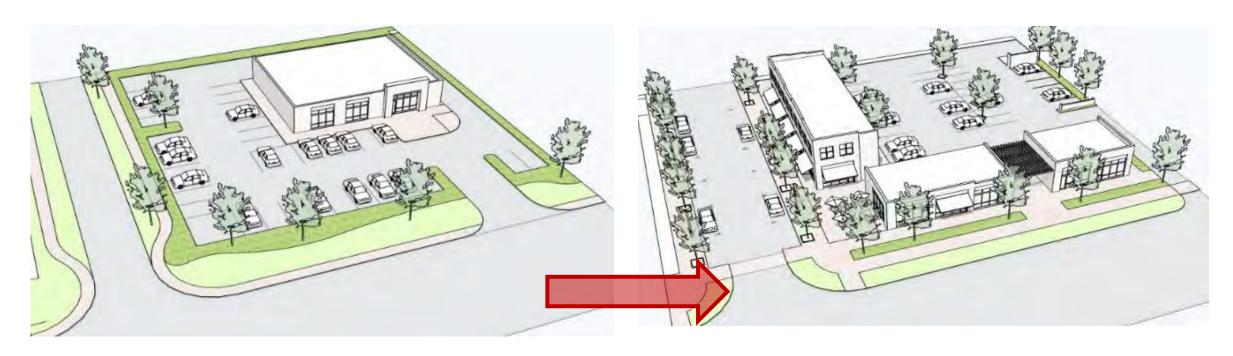
- Understanding market trends and the extent of the problem
- The critical role of the Public Realm (a FBC can't do it all!)
- A phased approach to corridor transformation
- FBC strategies that counter prevailing practices ("FBC Hints and Hacks")



FRAMING THE DISCUSSION:

- This discussion focuses primarily on the recommended strategies regarding the use of Form-Based Codes to achieve corridor transformation.
- This discussion assumes you have some basic understanding of Form-Based Codes and how FBCs differ from conventional zoning.

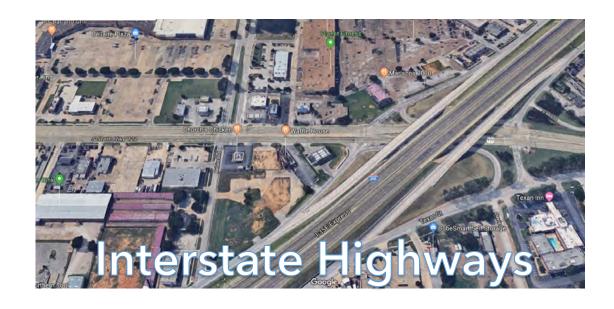
WHAT ARE FORM-BASED CODES?



- Auto centric (not pedestrian friendly)
- Single-use pods
- Development on one lot does not relate to any adjoining lots or the street context
- Value drops when original use is no longer viable

- Pedestrian-oriented (still accommodates cars)
- Mixed use (residential being an important component)
- Development on one lot needs to relate to adjoining lots AND the street context
- Value holds when original use is no longer viable

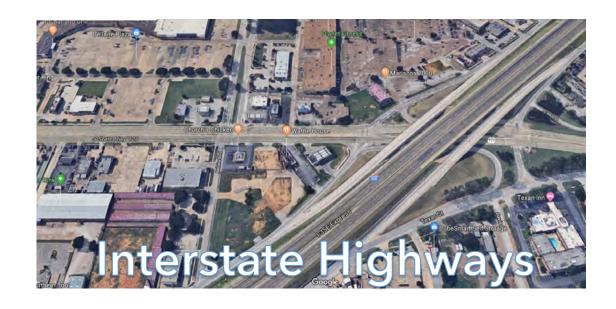
THE STATE OF AGING CORRIDORS

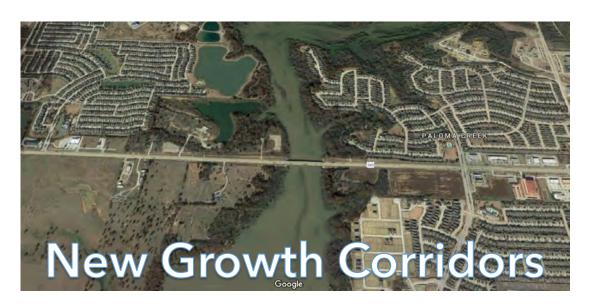




















THE STATE OF AGING CORRIDORS:

- Auto focused, often in excess of 4 lanes (often state controlled roadways)
- Lower traffic volumes than available capacity
- Dangerous to pedestrians and bikes
- Older commercial development, often obsolete
- Negatively impacts adjoining neighborhoods



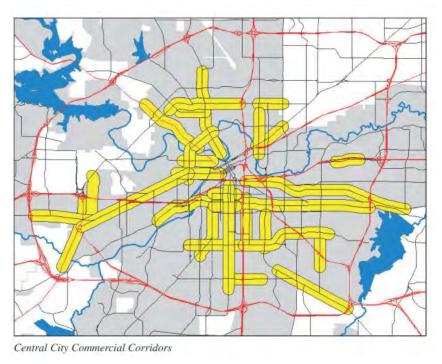


THE STATE OF AGING CORRIDORS:

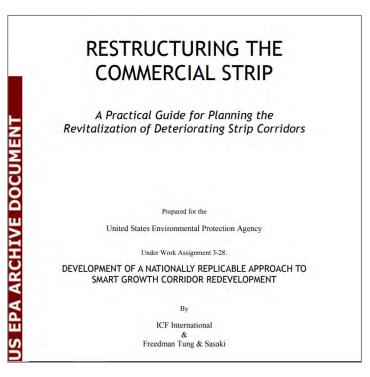
- Over designated for conventional commercial land use and zoning
- Limited market for new commercial
- Low rents, high vacancy and obsolete commercial formats
- Lack of unified vision makes reinvestment risky

Not a New Problem

2002



Commercial Corridors Strategy, City of Fort Worth 2010



2021





"The fundamental problem is the strip commercial development pattern itself: it is contrary to sound planning...."

- Luis Nunez, Commercial Corridor Redevelopment Strategies, 2021

Magnitude of the Problem Data Source: YE2020 Certified Files TEXAS DEPARTMENT OF TRANSPORTATION

Data Source: YE2020 Certified Files

Annual Report - Highway Status Open To Traffic Only

Transportation Planning and Programming Division

Eurotional		Lane Miles				
Highway System Functional System	Outside a City	Inside a City	Total	Outside a City	Inside a City	Total
Interstate						
Interstate	1,993.846	1,468.705	3,462.551	8,300.766	8,398.533	16,699.29
Other Freeway - Expressway	0.000	0.000	0.000	0.000	0.000	0.00
Other Principal Arterial	0.000	0.029	0.029	0.000	0.116	0.11
Minor Arterial	0.000	33.182	33.182	0.000	85.231	85.23
Major Collector	2,589.368	2,351.223	4,940.591	5,217.426	4,995.379	10,212.80
Minor Collector	0.000	0.409	0.409	0.000	0.818	0.81
Local	18.394	15.399	33.793	36.788	29.581	66.36
Subtotal	4,601.608	3,868.947	8,470.555	13,554.980	13,509.658	27,064.63
US Highways						
Other Freeway - Expressway	100.251	418.550	518.801	433.610	2,093.159	2,526.76
Other Principal Arterial	6,010.821	1,526.192	7,537.013	18,830.762	5,865.406	24,696.16
Minor Arterial	3,008.686	282.854	3,291.540	6,539.735	767.435	7,307.17
Major Collector	798.609	934.665	1,733.274	1,654.544	1,968.753	3,623.29
Minor Collector	0.000	0.000	0.000	0.000	0.000	0.00
Local	65.150	33.680	98.830	129.651	66.183	195.83
Subtotal	9,983.517	3,195.941	13,179.458	27,588.302	10,760.936	38,349.23
State Highways, Spurs, Loops and Bu	siness Routes	1				
Other Freeway - Expressway	200.386	516.810	717.196	883.092	2,653.669	3,536.76
Other Principal Arterial	2,161.483	2,204.850	4,366.333	6,580.578	8,899.106	15,479.68
Minor Arterial	5,685.281	1,206.486	6,891.767	12,390.466	3,336.385	15,726.85
Major Collector	4,245.218	1,394.111	5,639.329	8,666.849	3,081.474	11,748.32
Minor Collector	82.059	28.832	110.891	163.805	60.234	224.03
Local	49.021	47.941	96.962	100.618	96.783	197.40
Subtotal	12,423,448	5,399.030	17,822,478	28,785.408	18,127.651	46,913.05



Data Source: YE2020 Certified Files

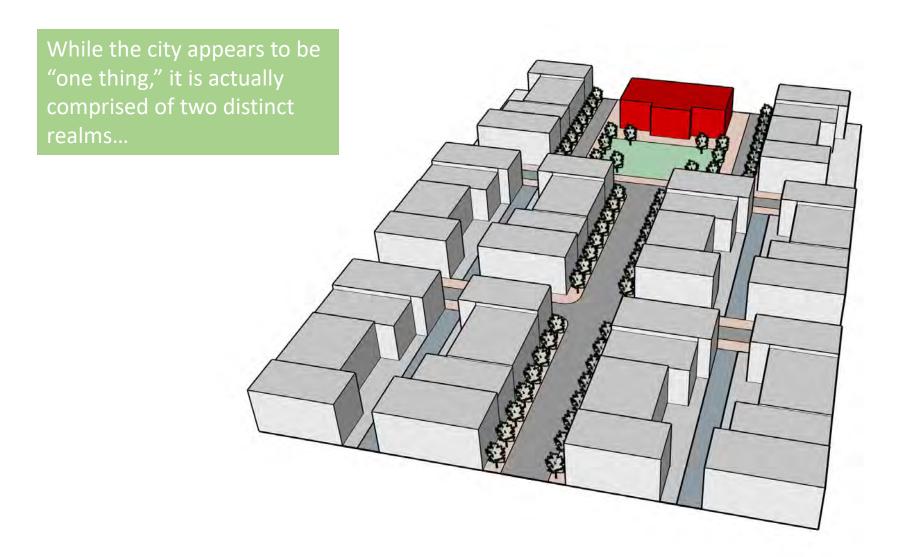
Annual Report - Highway Status Open To Traffic Only

Transportation Planning and Programming Division

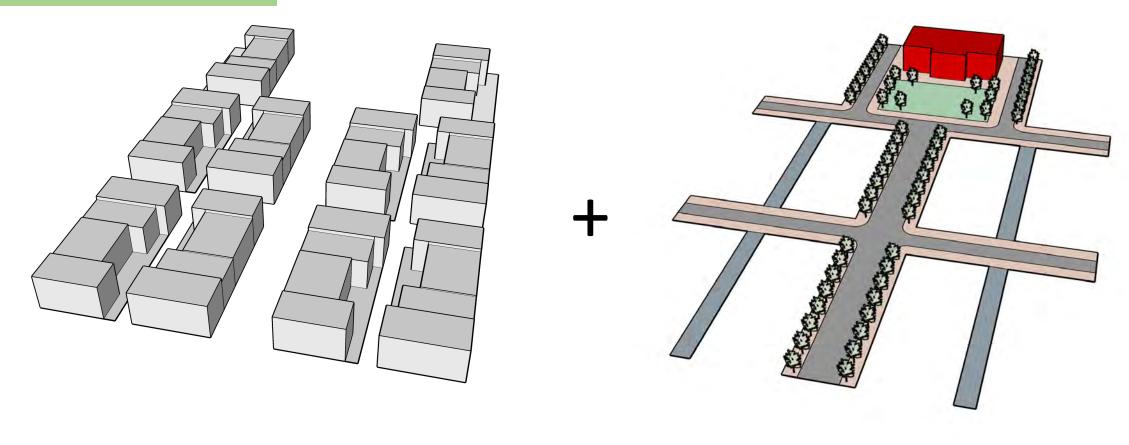
Functional Highway System System	Centerline Miles			Lane Miles			
	Outside a City	Inside a City	Total	Outside a City	Inside a City	Total	
Farm or Ranch to Mark	et Roads, Ranch	Roads, and Spurs					
Other Freeway - I	Expressway	0.000	6.538	6.538	0.000	26.152	26.15
Other Princ	ipal Arterial	240.293	753.621	993.914	802.178	3,248.363	4,050.54
Mi	nor Arterial	1,598.963	1,104.374	2,703.337	3,479.156	3,034.253	6,513.40
Maj	or Collector	25,289.242	1,787.985	27,077.227	50,729.212	3,792.179	54,521.39
Min	or Collector	9,761.863	255.848	10,017.711	19,525.445	513.582	20,039.02
	Local	83.111	9.600	92.711	167.256	20.252	187.50
	Subtotal	36,973.472	3,917.966	40,891.438	74,703.247	10,634.781	85,338.02
Pass, Park and Recreat	ion Roads						
Other Freeway - I	Expressway	0.000	4.577	4.577	0.000	18.308	18.30
Other Princ	ipal Arterial	1.034	26.565	27.599	4.136	133.615	137.75
Mi	nor Arterial	0.000	0.779	0.779	0.000	4.674	4.67
Maj	or Collector	167.747	12.842	180.589	335.916	24.848	360.76
Min	or Collector	112.669	9.258	121.927	225.090	18.516	243.60
	Local	18.687	1.808	20.495	37.374	3.616	40.99
	Subtotal	300.137	55.829	355.966	602.516	203.577	806.09
State	Grand Total	64,282.182	16,437.713	80,719.895	145,234.453	53,236.603	198,471.05

Approx. 14,000 mi. of arterial and lower classification TXDOT streets WITHIN CITIES!!

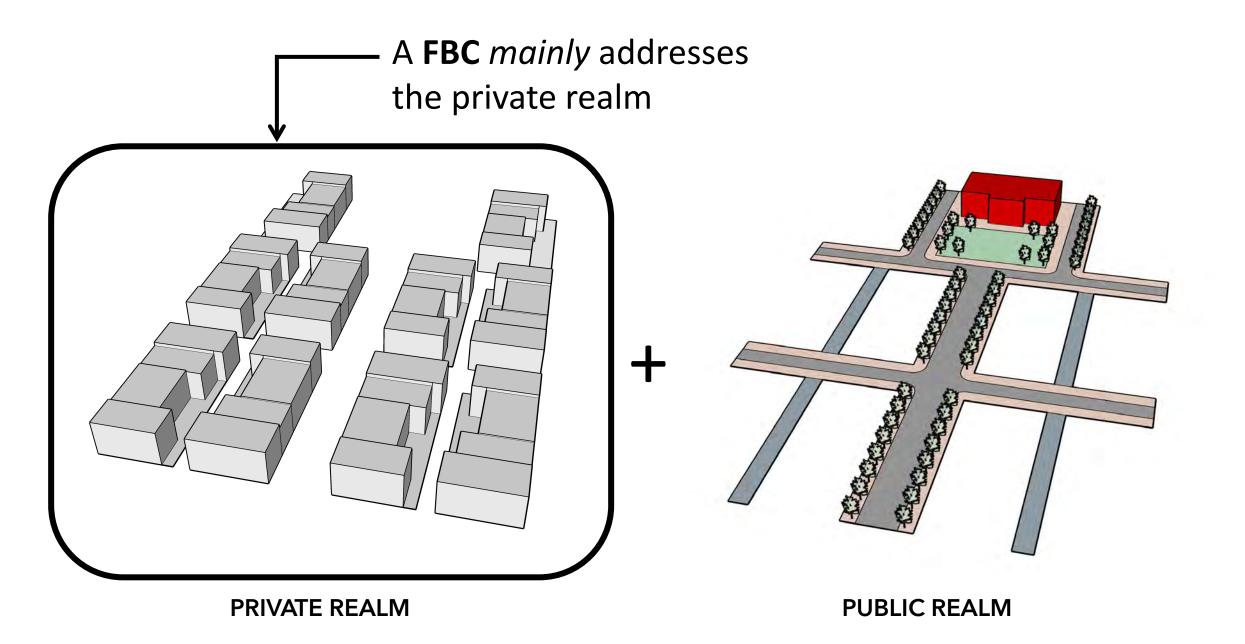
THE TALE OF TWO REALMS



Here we have divided the city into its two distinct realms, the private realm, and the public realm.

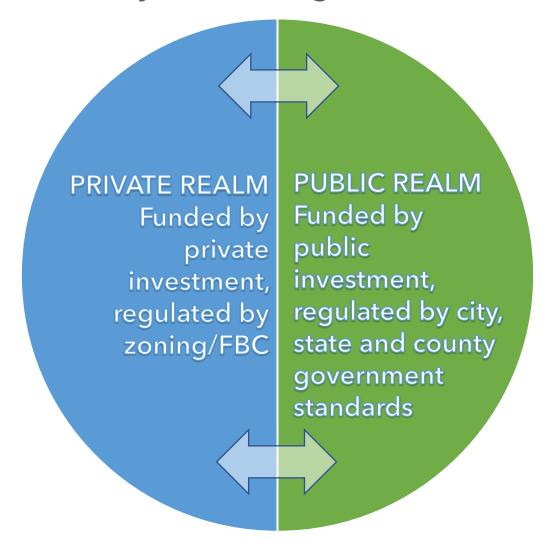


PRIVATE REALM PUBLIC REALM



A diagram illustrating the symbiotic relationship between the public and private realms.

Walkability = Matching the Two Realms





When only the zoning is addressed through a FBC, half the equation is missing.

Walkability = Matching the Two Realms







FBC MYTH BUSTED!

MYTH: Just implement an FBC and VOILA! You have a walkable place!

- We see with many cities the simplistic understanding that a Form-Based Code is a silver bullet to transform a corridor (or an entire city) from a car-dependent one, into a walkable, mixed use environment.
- A Form-Based Code is only half the equation. Cities need to invest in a <u>walkable/bikeable public realm</u> if they want to see real transformation
- The best FBC will not result in a walkable environment if there is a mismatch between the public and private realms

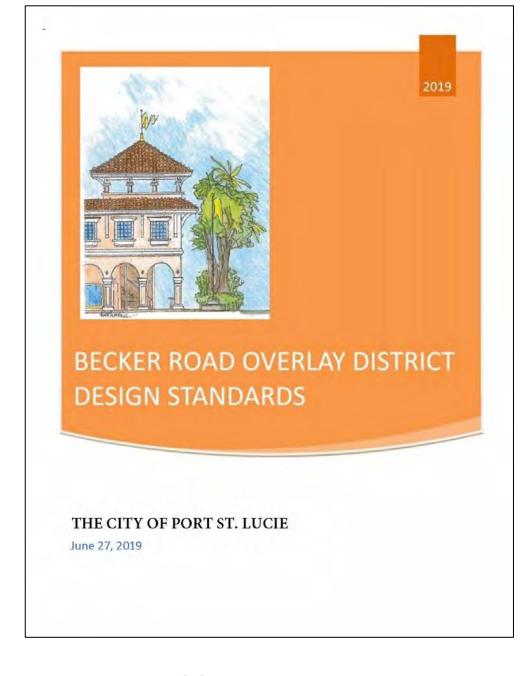




Existing context:

- Poor pedestrian facilities, sometimes nonexistent.
- Low density residential area without good connectivity
- No bike facilities
- High speed automobile corridor
- Wide crossings at intersections



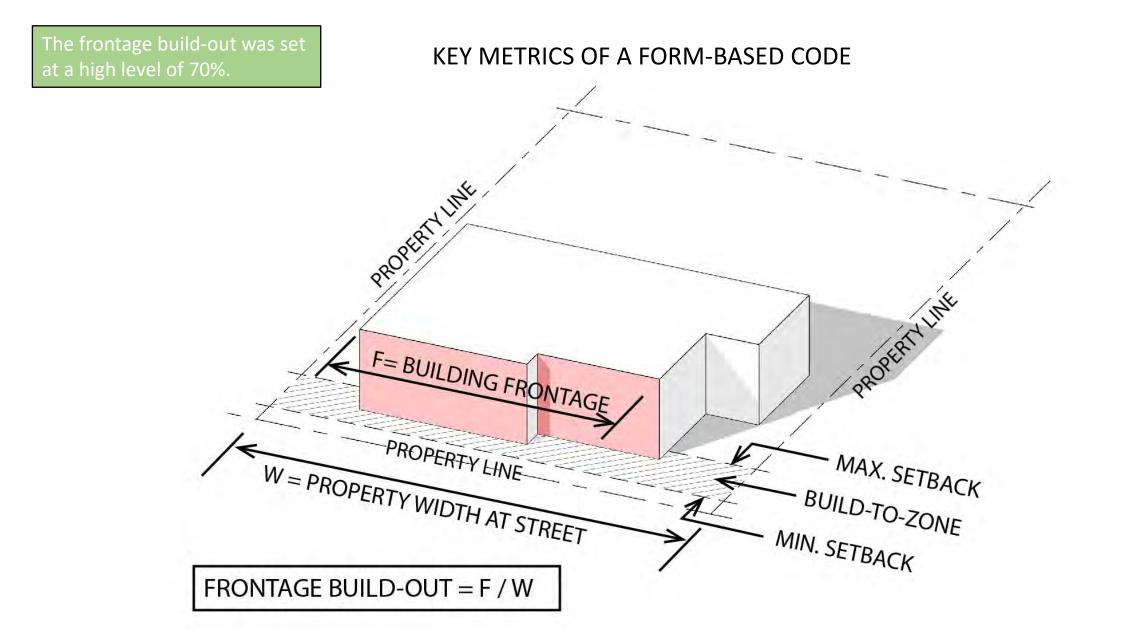


3.10 Activity Center & Village Subdistricts Commercial / Office / Mixed-Use Building Types

Commercial/Office/Mixed-Use Building Types		
3.10.1 - Lot Criteria		
A - Overall Lot Area (min.)	As required per Land Use Conversion Manual	
B - Overall Lot Width (min.)	As required per Land Use Conversion Manual	
Overall Building Coverage (max.) Overall Impervious Surface (max.)	40% 80%	

C - Build-to Zone (min max.)	22 ft 25 ft primary and side streets
D - Side Yard Setback (min.) - abutting properties E - Setback between Building (min.)	10 ft. 20 ft.
F - Rear Yard Setback (min.)	Properties located in a Limited Commercial (CL) land use are subject to setbacks as per Conversion Manual requirements.
	15 ft. (properties less than 150 ft. deep unless subject to Conversion Manual requirements)
	25 ft. (except as indicated above).
Accessory Structure Offset from Bldg.	10 ft.
G - Driveway / Parking Setback from Bldg. (min.)	10 ft excluding access to service areas and drive- throughs.
H - Building Length (min max.) Primary Street Building Length (min max.) Side Street	Minimum building frontage width (min) 800 ft. (max.) No more than one building. 40 ft 300 ft.
I - Building Frontage (min.)	70% (primary streets)
Min. building frontage requirement are not applicable to buildings facing side streets.	Refer to Section 3.4.5 for properties that are 150 feet or less in depth located along a primary street

But when it came to implementation, there was no investment in a walkable public realm and the vision relied too heavily on a form-based code in the form of an overlay district.

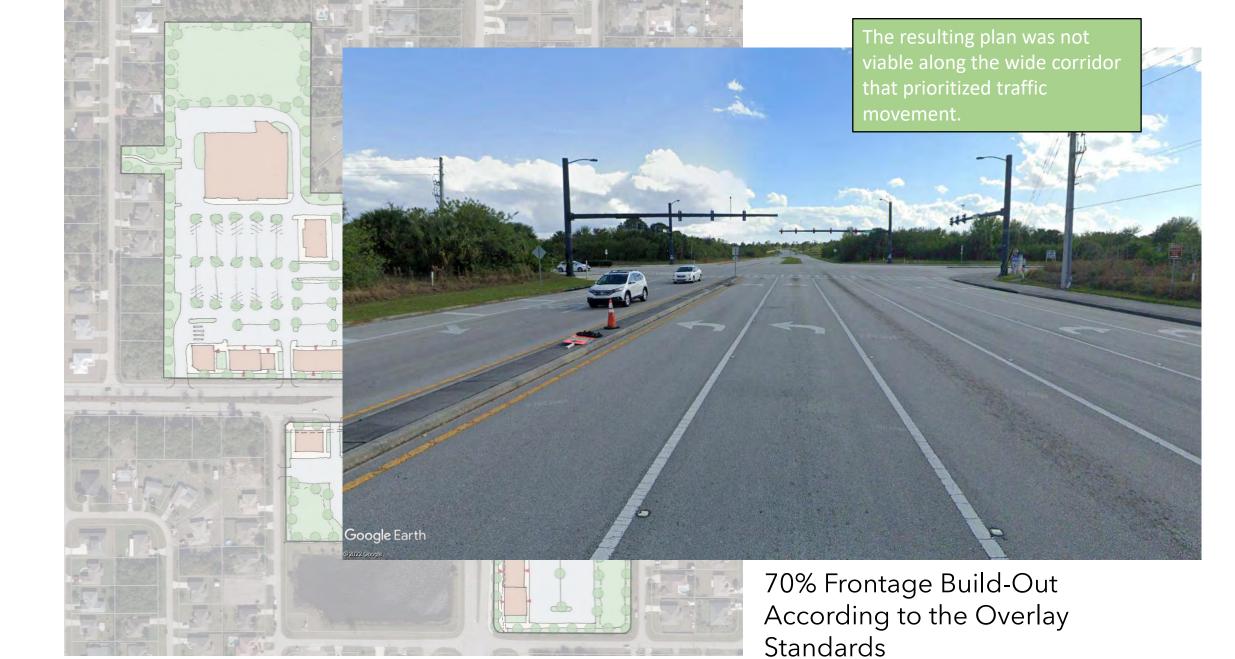






We did an illustrative plan to represent the current overlay standards.

70% Frontage Build-Out According to the Overlay Standards





Studies showing an increasing loosening of the frontage build-out standards



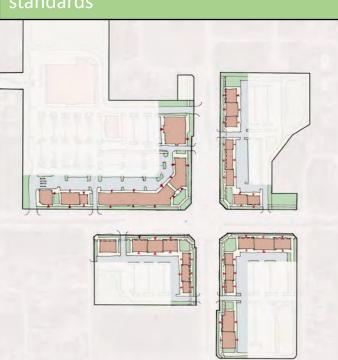


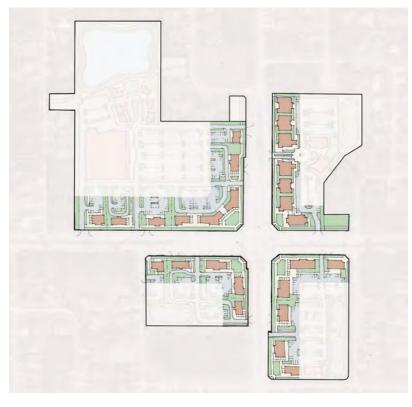


Scenario 1 Scenario 2 Scenario 3

Frontage Comparison

Studies showing an increasing loosening of the frontage build-out standards







70 %

Scenario 1 - Current Standards

50 %

Scenario 2

30 %

Scenario 3





LESSONS LEARNED:

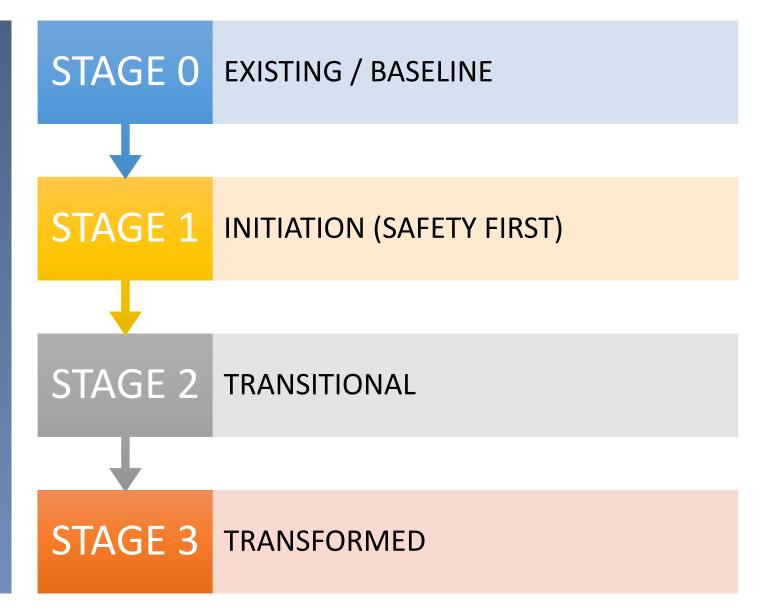
- The corridor was not yet ready for a robust Form-Based Code with a high frontage building out standard.
- The pedestrian facilities along the corridor did not accommodate safe and comfortable pedestrian activity.
- Public realm did not MATCH the private realm and until a major redesign of the roadway is made, the form-based standards had to be eased to accommodate needed services and move the corridor in the right direction toward better walkability.

THREE STAGES OF CORRIDOR TRANSFORMATION

These stages of corridor transformation were development by Civic Plan Studio to help cities better coordinate zoning and form-based standards with conditions in the public realm.

THE FOUR STAGES OF CORRIDOR TRANSFORMATION

(calibrated to the public and private realms)



PRIVATE REALM **PUBLIC REALM** STAGE 0 **EXISTING** / Arterial dominated by traffic Conventional zoning in place with large setbacks, **BASELINE** movement Sub-standard (or non-existent) separated uses, and parking sidewalks and bike infrastructure minimums. Crossing is difficult and potentially Obsolete building forms Visual clutter (signage and dangerous Roadway is often overbuilt code violations)



INITIATION	•	Focus on safe pedestrian
(SAFETY FIRST!)		and bike environment with
		continuous and wide

Improve cross walks

lanes or shared paths

PUBLIC REALM

Improve corridor aesthetics

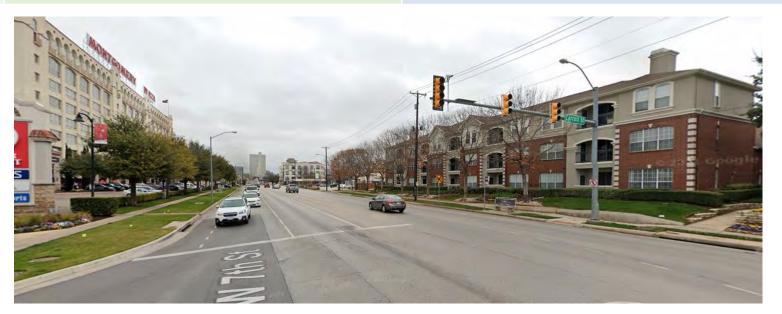
PRIVATE REALM

- Loosen zoning to relax setbacks, allow mixed use by right (horizontal or vertical)
- sidewalks and protected bike simplify parking standard (blended rates and shared parking reductions).
 - Landscaping is important to mitigate the impact of parking lot paving.
 - A full-fledged FBC may not be warranted yet.



STAGE 1

STAGE 2	PUBLIC REALM	PRIVATE REALM
TRANSITION	 Add more elements to improve pedestrian comfort - reduce crossing distances (no more than 3 lanes at a time). Add shade, seating, and connectivity. Provide/improve transit access and facilities Possibly add on-street parking 	 Consider FBC-LITE Cover the basics like screening parking from the ROW. Street trees on private property are critical to creating an inviting pedestrian environment. Do not overextend on frontage requirements (50% or less). Use building design standards to provide cohesion.



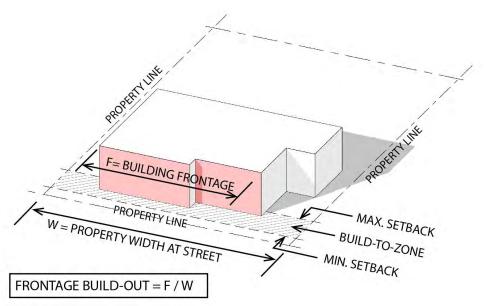
CIVICPLANSTUDIO.COM

STAGE 3	PUBLIC REALM	PRIVATE REALM
TRANSFORMED	 Traffic has been "tamed", speed reduced Possibly via a lane reduction (ideally, no more than 4 lanes with a center median at crossings) Addition of buffered on-street bike facilities Sidewalks are wide, shaded, and well-connected to existing neighborhoods. On-street parking 	 A robust FBC may be warranted to maximize market opportunity. Frontage requirements may be increased above 50%. Most development will naturally locate along the sidewalk frontage.



STAGE	FORM- BASED CODE	FRONTAGE STANDARD
0 - EXISTING	N/A	N/A
1 - INITIATION	NO*	N/A
2 - TRANSITION	YES	< 50%
3 - TRANSFORMED	YES	> 50%

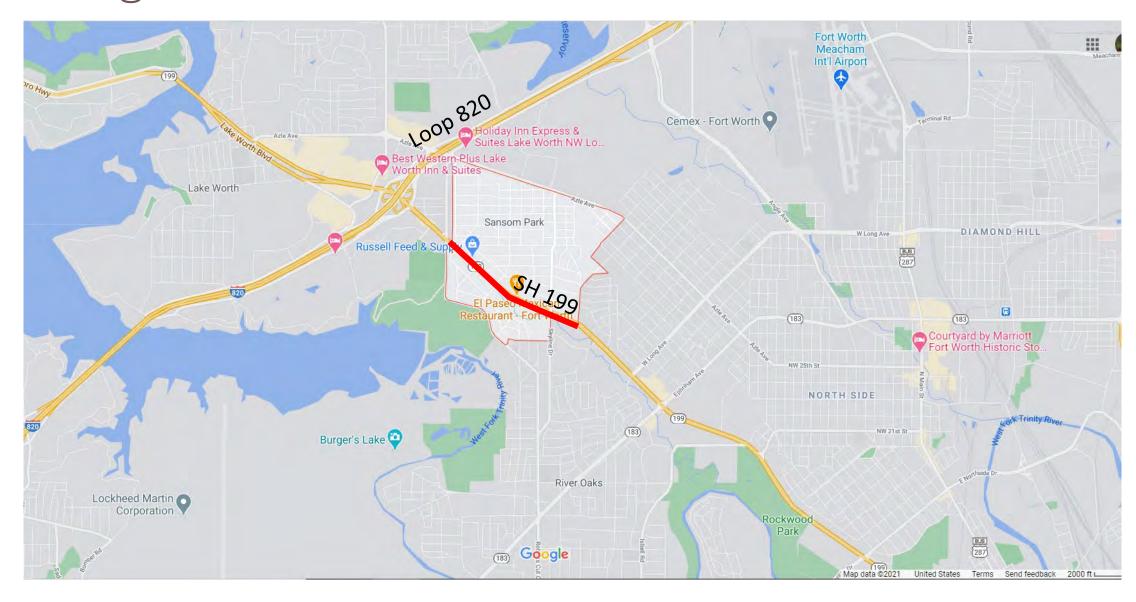
*Some enhanced standards are applicable at this stage, but they would not constitute a high-level form-based code.



CASE STUDY: SANSOM PARK, TX



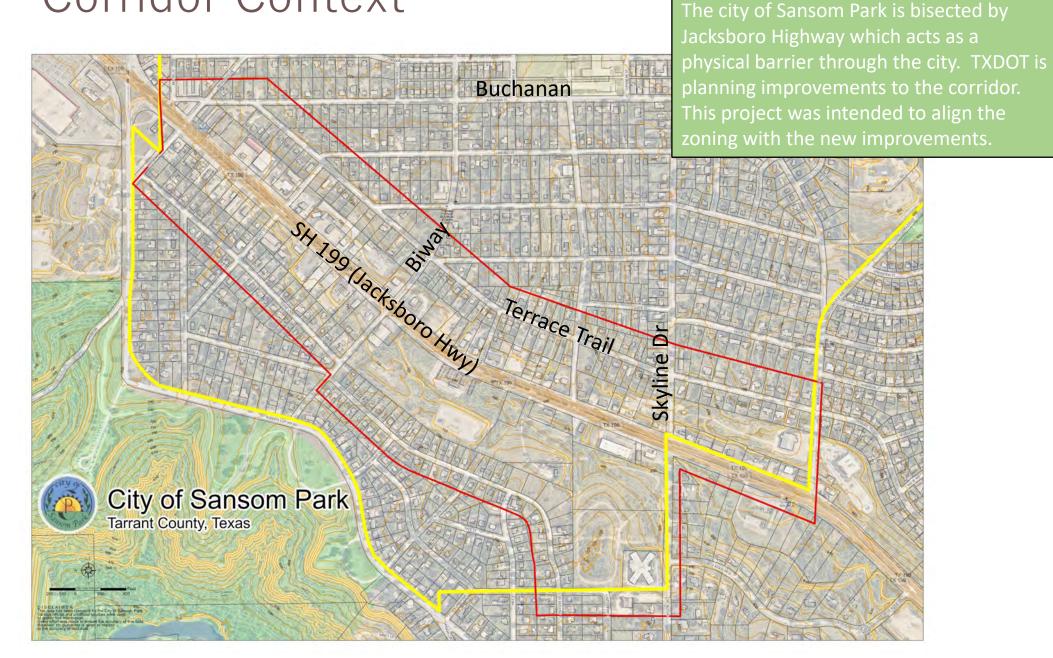
Regional Location





CIVIC PLAN STUDIO

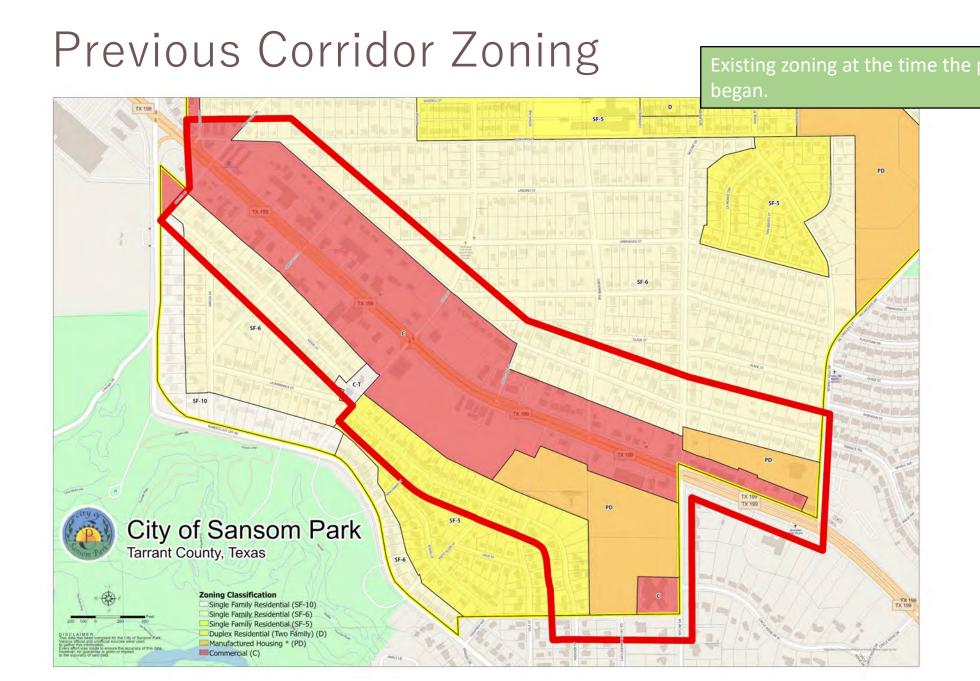
Corridor Context





199 CORRIDOR PLA Y OF SANSOM PAR







Issues to be Considered

- Older, commercial, auto-related uses that do not meet any of the existing zoning standards
- Smaller lots and buildings (mostly small, independent business owners) with limited block depths
- Limited locations along the corridor for property assembly and larger scale redevelopment
- Existing commercial zoning on the corridor with limited market for redevelopment due to low rents

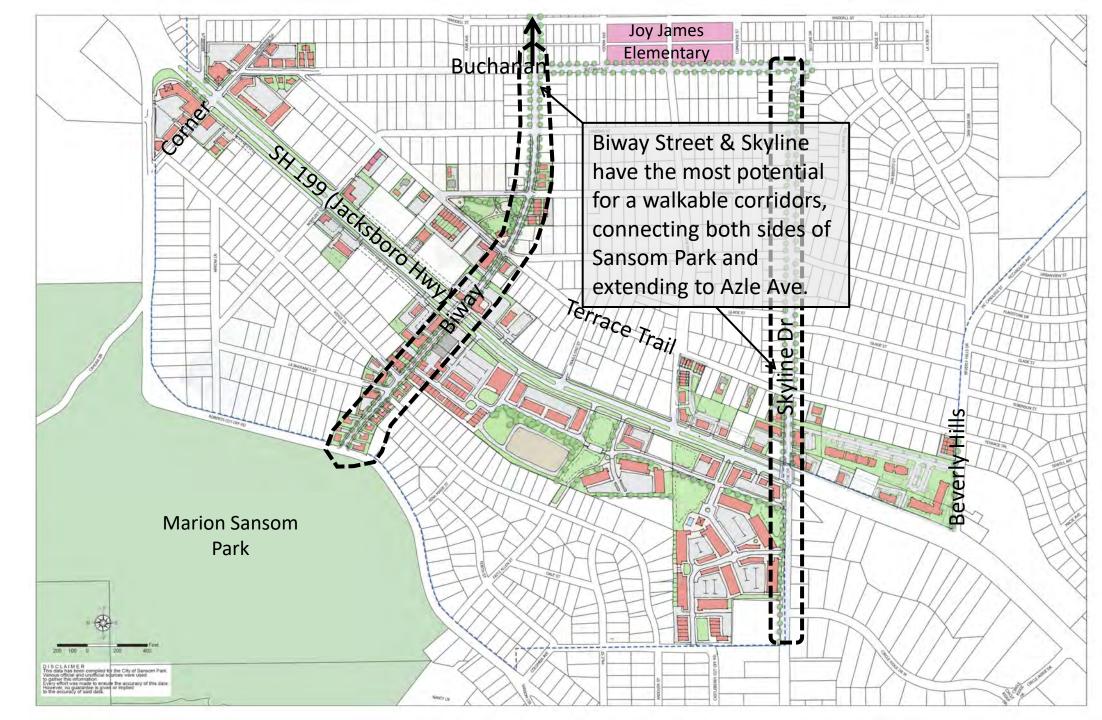




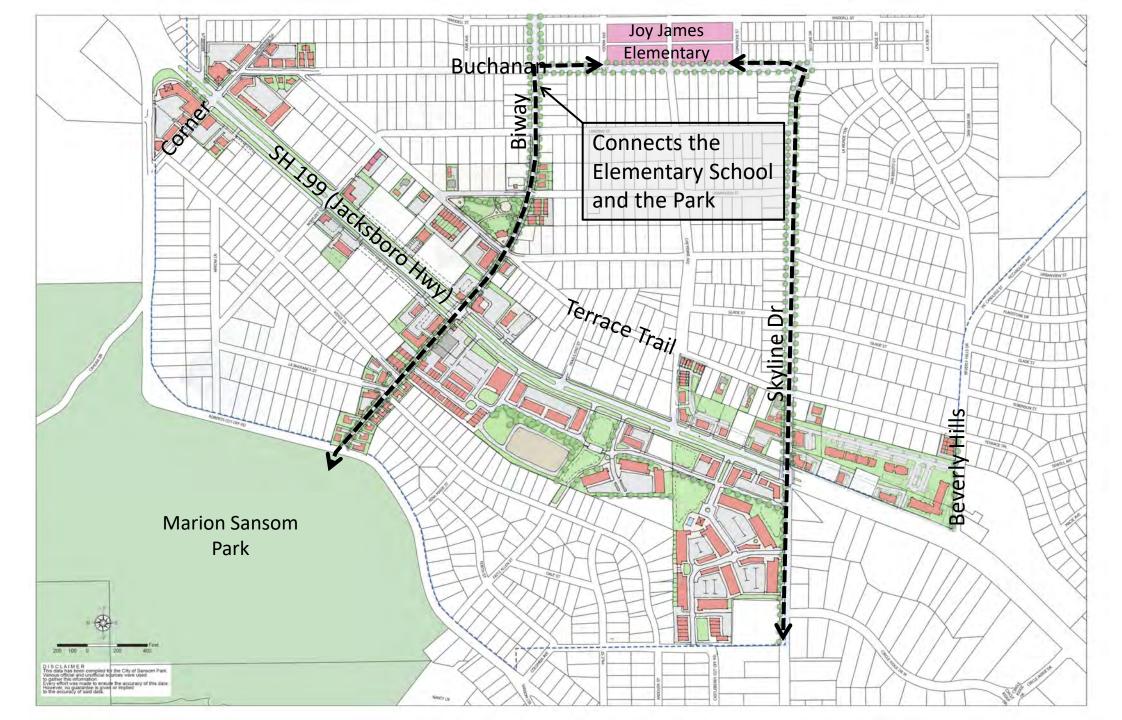


199 CORRIDOR PI

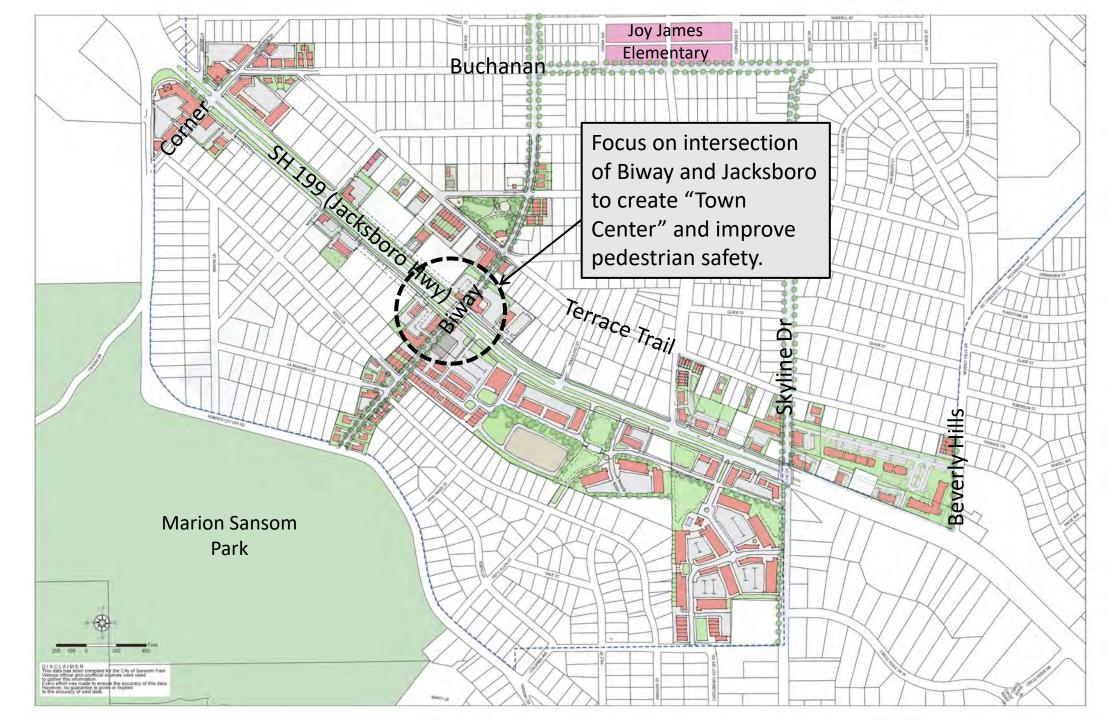
CIVIC PLAN STUDIO







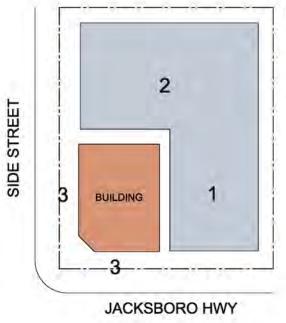






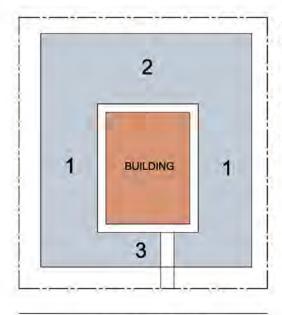
199 CORRIDOR PLA

Jacksboro Hwy: Small Parcel Redevelopment Options



CORNER LOT

- Parking permitted on side opposite of side street
- Parking permitted behind building
- No parking between building and street. Provide pedestrian connection to public sidewalk/shared path



JACKSBORO HWY

INTERIOR LOT

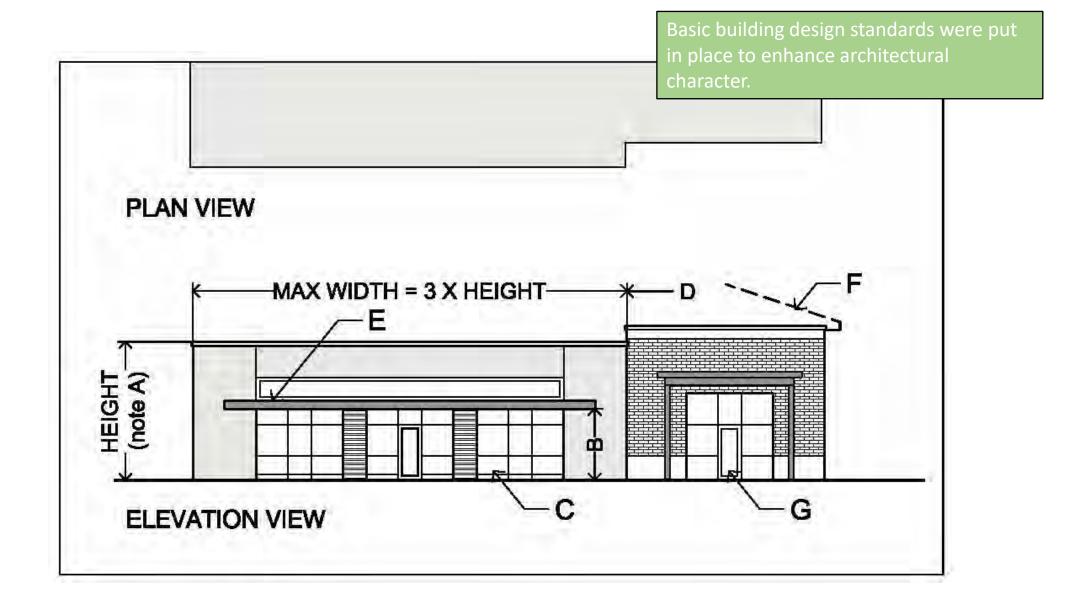
- Parking permitted on both sides of building
- Parking permitted behind building
- A single two-way lane is permitted between the building and street - no parking directly in front of building. Provide pedestrian sidewalk connection to public sidewalk/shared path



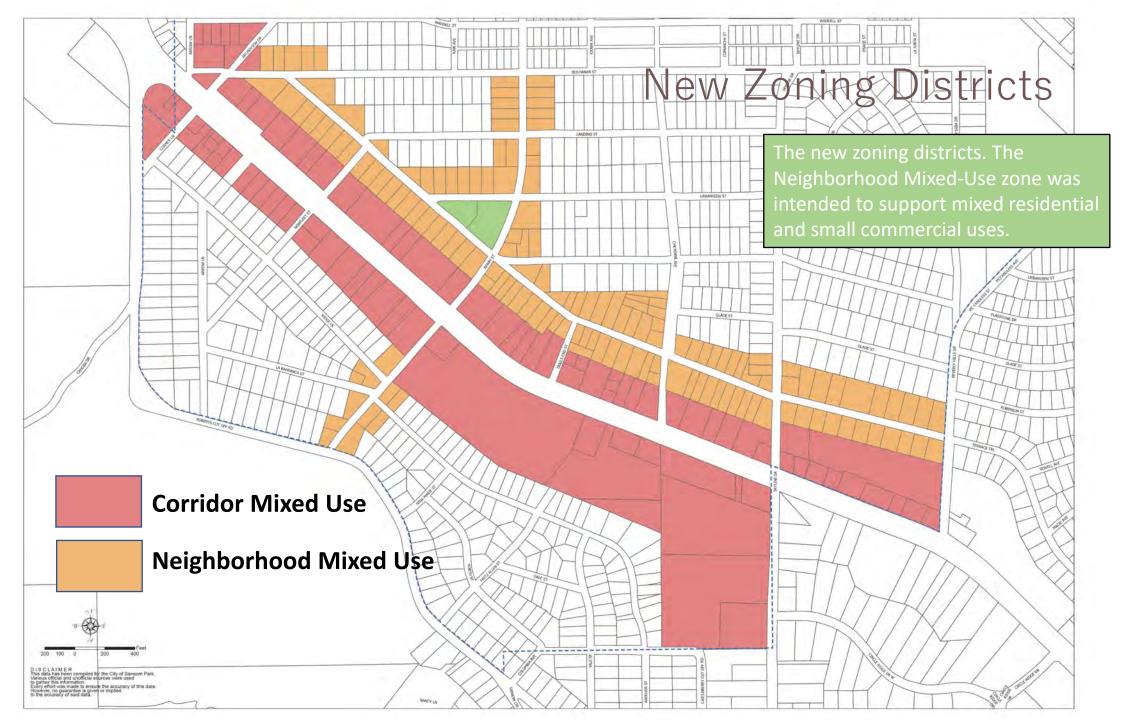
The site standards along Jacksboro highway were somewhat lenient giving the auto-centric context. Emphasis was given to placement of buildings on corner sites.

199 CORRIDOR PLAN



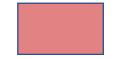








Zoning Standards for Corridor Mixed Use



- Allow multi-family and "missing middle" residential uses by right
- Reduce parking
- Reduce front setbacks along Jacksboro Hwy to 10' (with a minimum distance from curb to building)
- Auto-service uses to go through SUP
- Commercial building design standards
- Enhancements to the pedestrian realm





199 CORRIDOR PI Y OF SANSOM PA





Sansom Park: Key Takeaways

- Focus on a "lean code" approach for redevelopment of the commercial corridor
- Plan for the corridor within a city-wide framework
- Phased/modest implementation to meet the capacity needs of the city

Jacksboro and Biway - Proposed

FBC HINTS AND HACKS

(FROM THE FRONT LINES)

ISSUE: Walkability has its limits

(about 1200-1500 feet!)

The Problem:

Most corridors are too long, and untamable (at least in the short run), to realistically accommodate a walkable environment for its entire length

The Hack:

Focus on the potential of **side streets** that connect to neighborhoods. They may be better candidates for walkable environments.

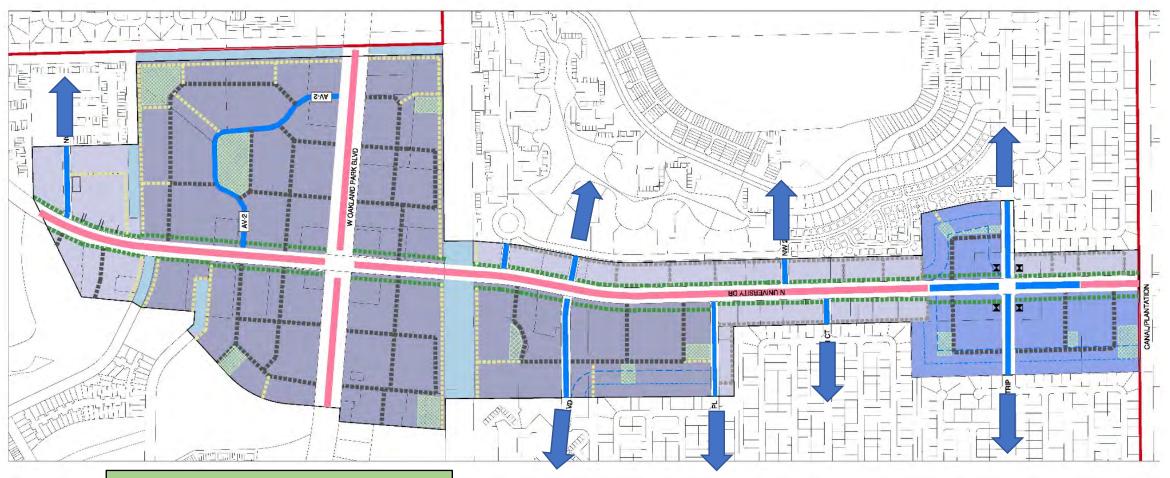
CIVICPLANSTUDIO.COM



A 2-mile + corridor in suburban south Florida. The city wanted to transform the corridor via a form-based code.



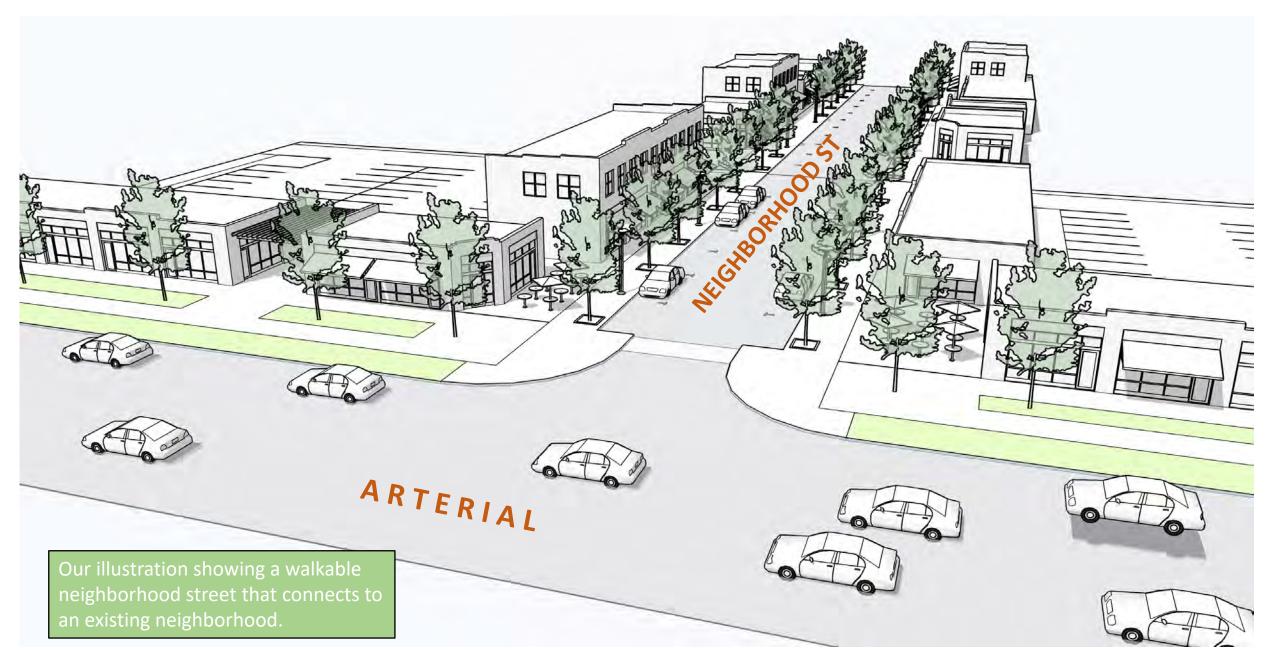
Pedestrian sheds overlaid on the corridor. The corridor is too long to support a continuous pedestrian environment.



We focused on implementing walkable 'A' streets on the side streets that connected to neighborhoods.

'A' Street Frontage

'B' Street Frontage









Proposed improvements to Biway which would correspond to the new zoning.

ISSUE: Walkability has its limits

(about 1200-1500 feet!)

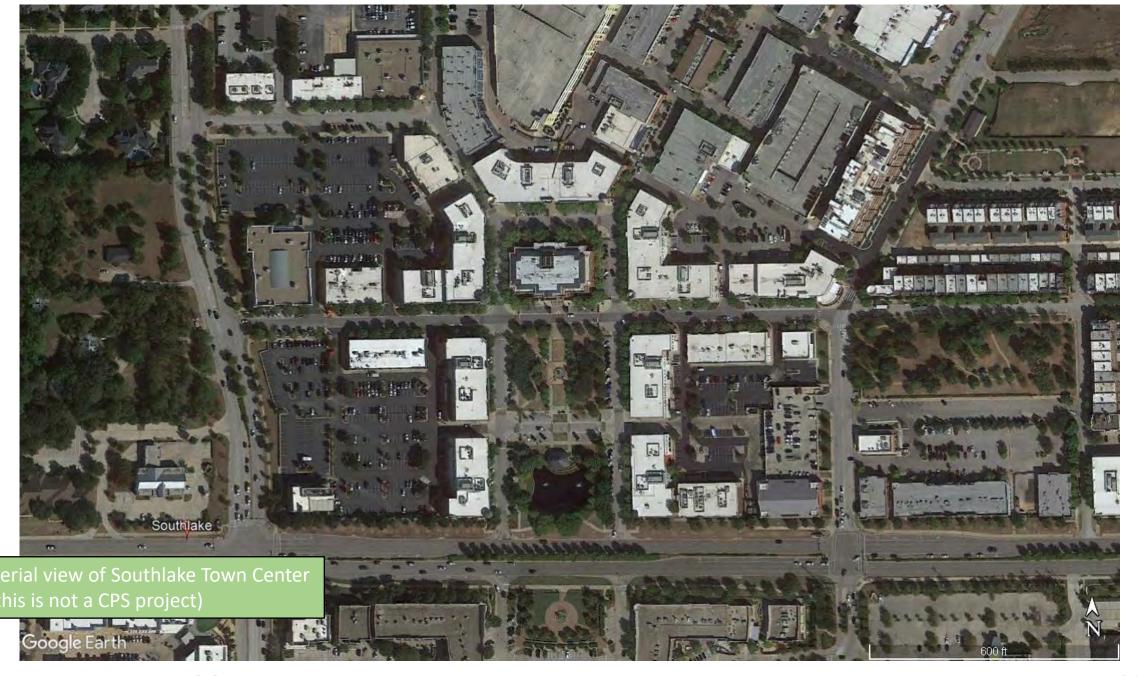
The Problem:

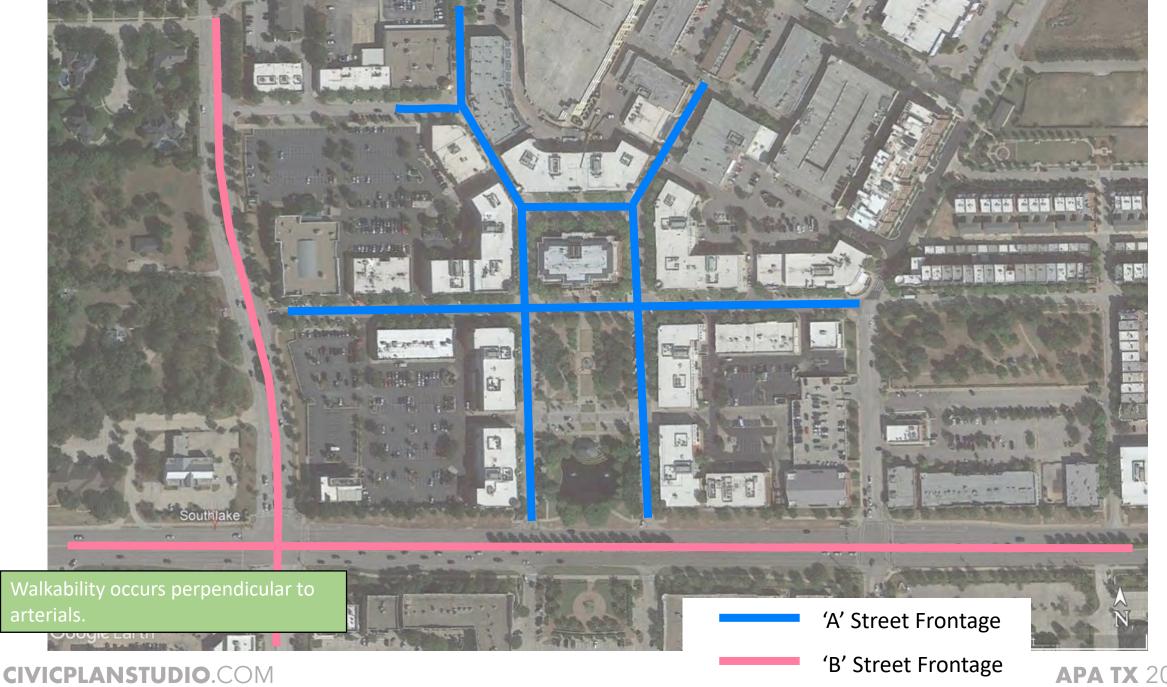
Most corridors are too long, and untamable (at least in the short run), to realistically accommodate a walkable environment for its entire length

The Hack:

Focus on **nodal**redevelopment and create
more walkable
environments within mixeduse activity nodes.

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APA TX 2022

ISSUE: Walkability has its limits

(about 1500 feet!)

The Problem:

Most corridors are too long, and untamable (at least in the short run), to realistically accommodate a walkable environment for its entire length

The Hack

Along the corridor, focus on bikeability and micromobility.





Protected bike lanes and shared use paths are appropriate for transportation corridors.

ISSUE: The "Copy and Paste Code"

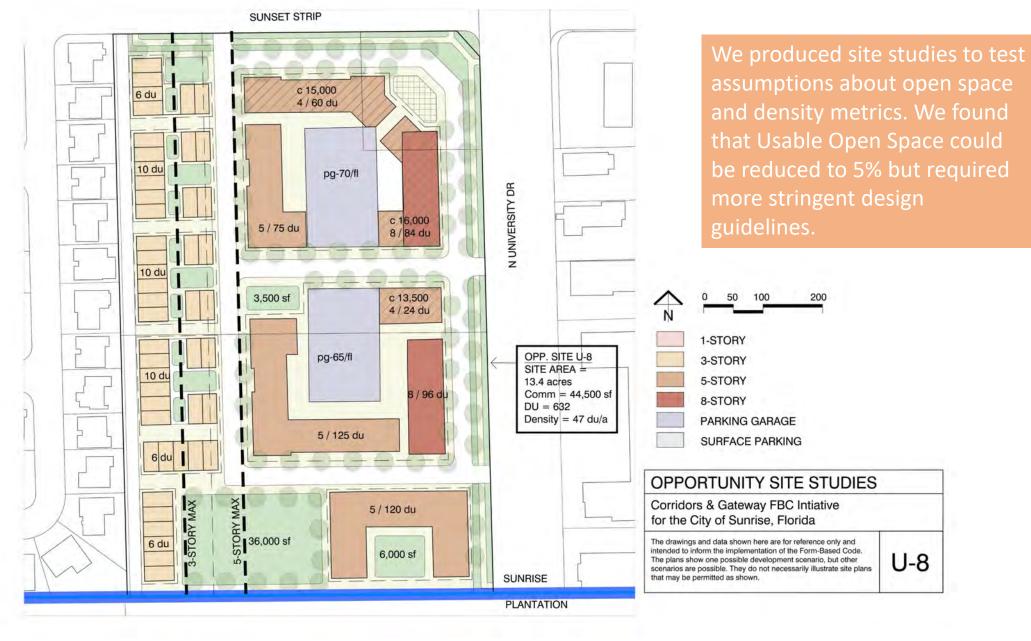
The Problem:

Some metrics are passed from one code to the other, without a lot of thought as to the impact of regulation.

The Hint:

Question every code metric. What are the cost implications? What are the realistic outcomes of the metric?

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- 1. Open space is bordered by buildings having 'A' Frontages on at least two sides, with multiple building entrances to activate the space
- 2. Perimeter sidewalk encompasses open space facilitating pedestrian access
- 3. Area of Open Space measured to outside edge of continuous perimeter sidewalk

Note: Programmatic elements not shown



The quality of the open space was more important than the size of the open space.

ISSUE: Beware the 0' build-to line

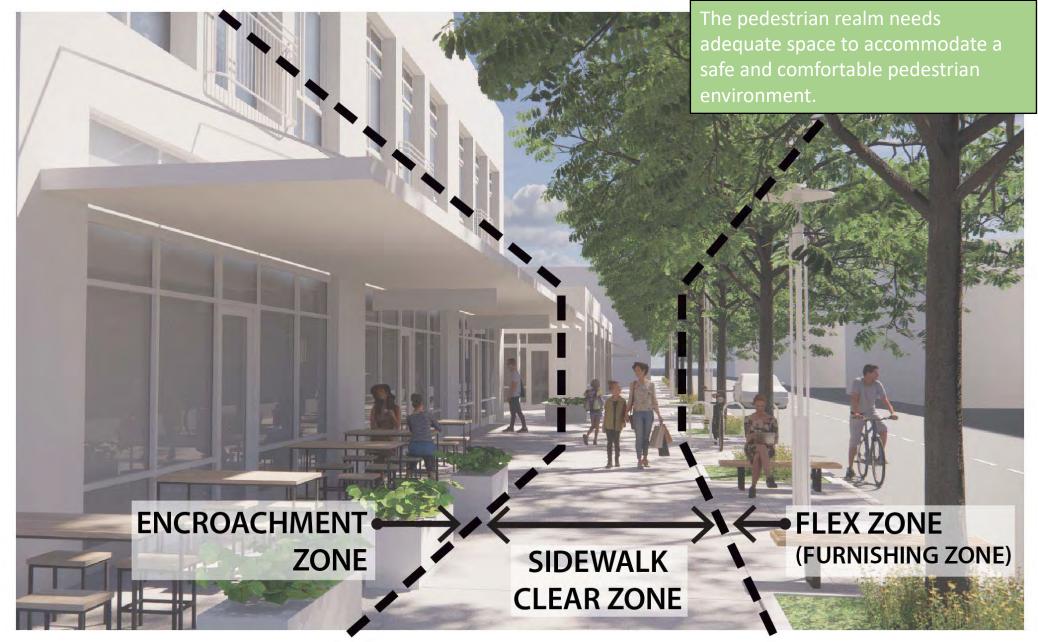
The Problem:

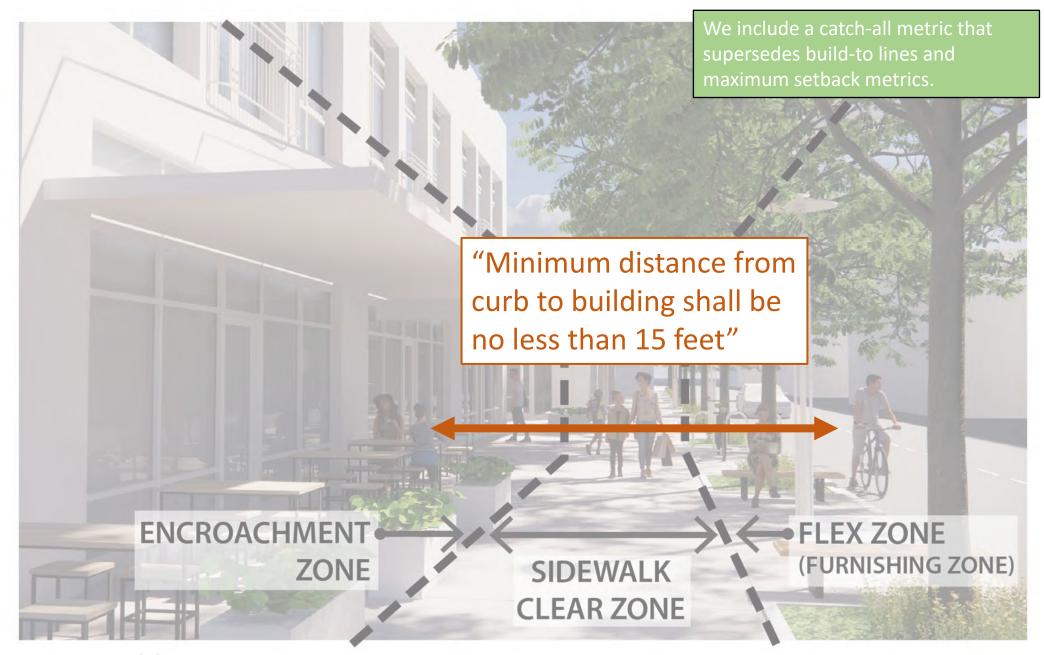
FBC's often encourage, or require, a 0-foot front setback, but this may not allow enough space for a safe and comfortable pedestrian environment.

The Hack:

Encourage shallow setbacks in order to create an urban street wall, but have a minimum distance from curb to building that allows adequate space for a comfortable pedestrian realm.







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APA TX 2022

ISSUE: Consider the entire pedestrian network

(especially for transit corridors)

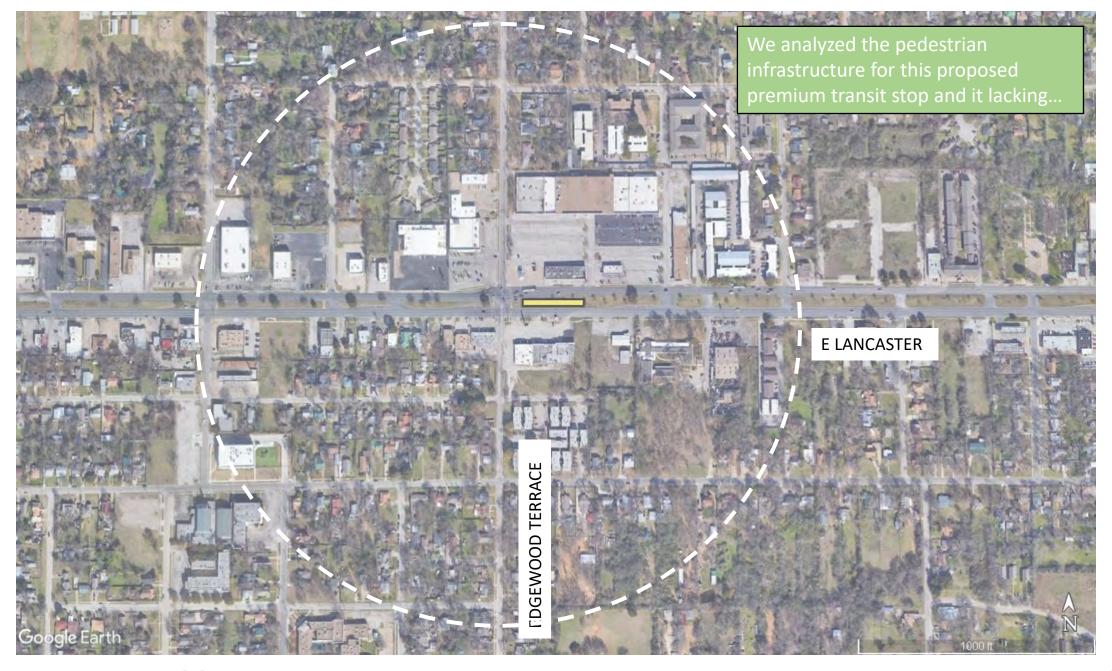
The Problem:

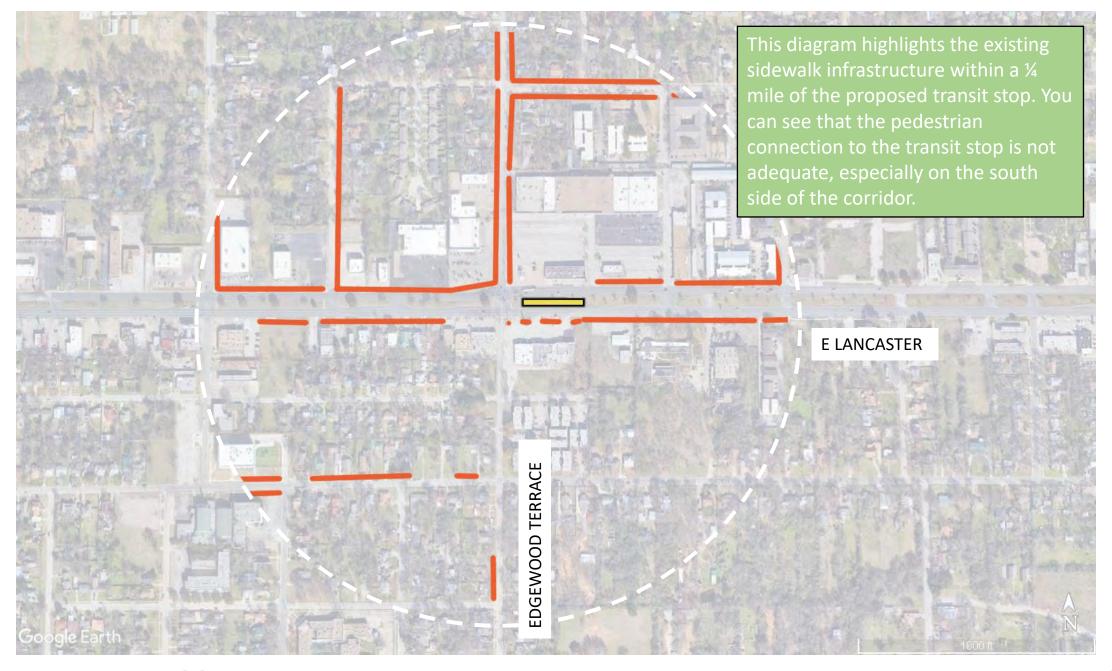
Many neighborhoods adjacent to transit stops do not have adequate pedestrian facilities to serve the transit stop

The Hint:

When analyzing transit viability, look at the **entire pedestrian network** that connects riders to the stop.

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ISSUE: Building entrance location

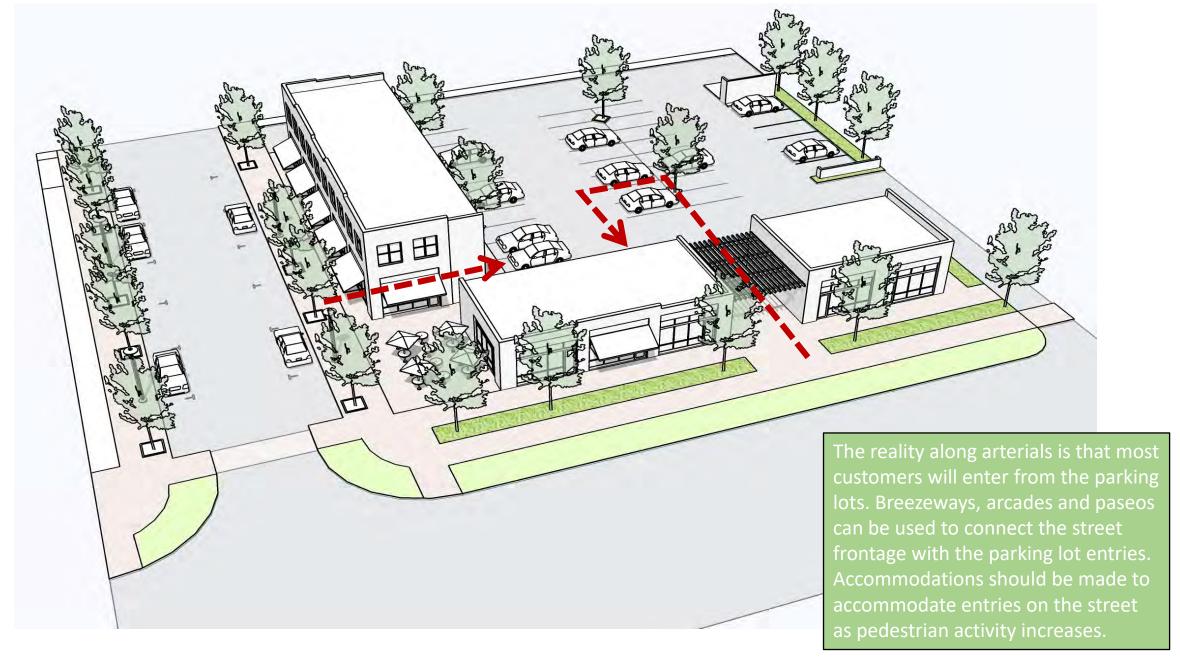
The Problem:

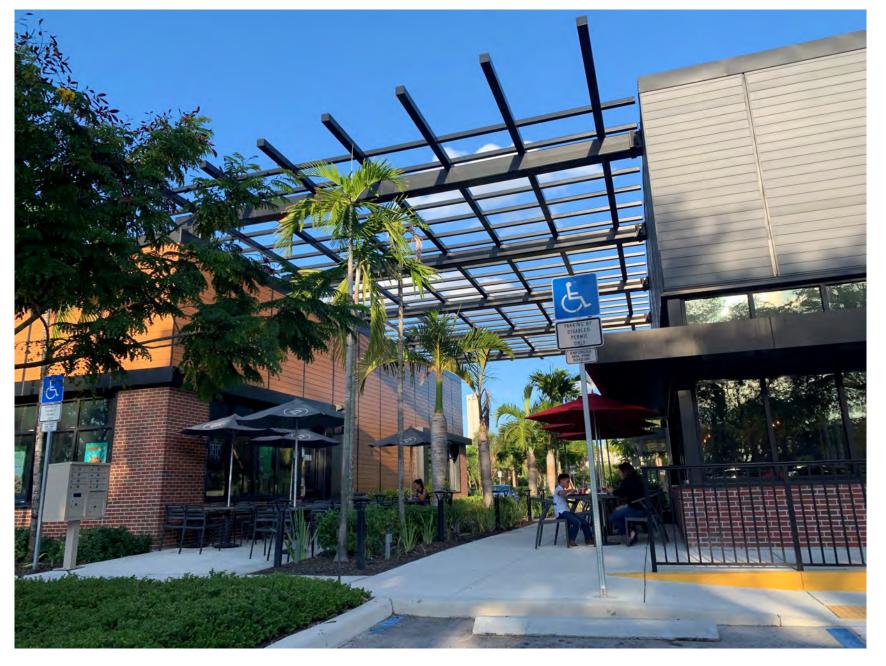
FBC's typically require entrances facing the street, even though a very small percentage of customers will enter from the sidewalk. Many of these entrances end up being unused or even locked.

The Hack:

Allow breezeways and arcades to connect the pedestrian realm with the entrance on the parking lot side.







ISSUE: We want mixed-use!

The Problem:

Many codes require mandatory ground floor retail or establish arbitrary percentages for commercial uses that are usually not supported by the market.

The Hack:

Less is more; walkable retail often occurs in **very small increments**; consider limited locations where ground floors are built to commercial standards (has implications on housing affordability)

Market Context: Future of Retail

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The Future of The Retail Store

By Doug Stephens



Retail is dead!

How much could US retail shrink? And where?

By Joe Cortright | 20.3.2017

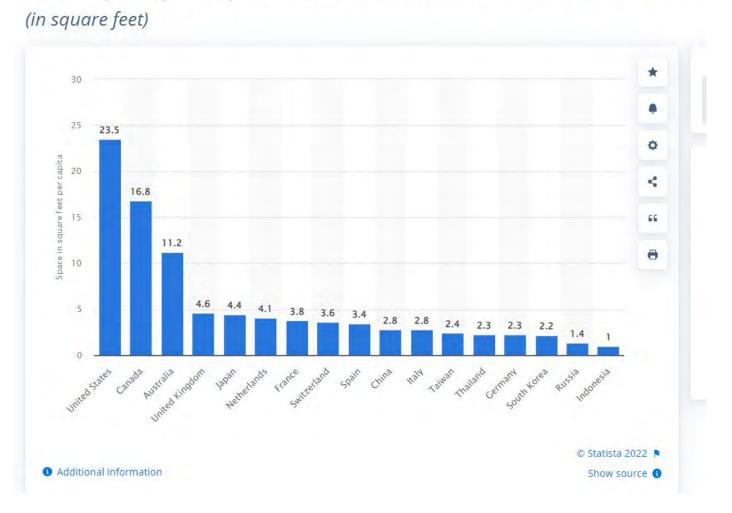
The first quarter of 2017 has marked a parade of announced store closures. The long awaited axe has fallen on 68 more <u>Macy's</u> stores around the country. <u>J.C. Penney</u> has announced it will close another 138 stores. Other major national retail chains, including The Limited, Gap, Walgreens, Aeropostale and Chico's, have also announced similarly large closures. These are just the latest moves in a shifting, mostly shrinking retail landscape in the United States.



Market Context: Reality of Retail Demand

The US per capita average is about 24 square feet of retail space per capita (typically higher in metro areas)

Retail space per capita in selected countries worldwide in 2018



ISSUE: No Emphasis on Plan Review

(post code adoption)

The Problem:

After code is adopted, staff is not trained in using the nuances of the FBC, especially flexibility inherent in the code

The Hint:

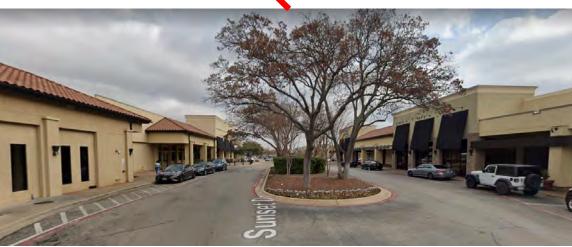
Post FBC adoption support is critical to help staff understand how to apply and interpret the code in areas where the code is vague

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 FBCs are only half the equation; true transformation can only be achieved when there is corresponding investment in the public realm.

 There are three stages to corridor transformation that can be used to guide cities on the timing of FBCs.

 In the "Hints and Hacks" section we presented various strategies and workarounds to help create a more nuanced and functional code.



Questions & Contact Info

Jay Narayana

Email: jay@livableplans.com

Phone: 817.937.7186

Michael Huston

Email: mh@civicplanstudio.com

Phone: 727.685.8640

