

# Transportation Design FOR Communities

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Atlanta, GA  
May 11-12, 2006

## Transportation Design for Communities

*Hosted by the Center for Quality Growth and Regional  
Development at the Georgia Institute of Technology*

### Module 2: Urban Design & Community Context

May 11, 2006 Atlanta, GA

Instructors: Richard Dagenhart, AIA / Ed McKinney, AICP

Module 2 will present basic community elements and how these elements can be assessed. This session will demonstrate structural elements of conducting a contextual analysis for the social, physical and economic conditions of a community, or study area, in which the transportation initiative is situated. This multi-disciplined assessment will allow the project team and the local community to understand the complex issues related to community development, its relationship and sensitivity to roadway design alternatives, and most importantly, the expectations of the project's vested stakeholders.

WHAT IS URBAN DESIGN?



# WHAT IS URBAN DESIGN?

## ARCHITECTURE, LANDSCAPE, URBANISM

Architecture  
Landscape Architecture  
City Planning  
Civil Engineering  
Transportation Engineering  
Real Estate Development  
Elected Officials  
Property Owners  
Neighborhood Organizations  
Public Interest Groups  
And  
On and On and On





**What makes Savannah, Savannah?**



**Building and Land Uses – Like on River Street?**



**Events – Like the St. Patrick's Day Parade?**



**People – Like SCAD Students and Faculty?**



# **What Makes Savannah, Savannah?**

**Land Uses?**

**Events?**

**People?**

**No, not really.**

**People, businesses, events - including us –  
are temporary.**



**Buildings?**

**What Makes Savannah, Savannah?**

**Buildings?**

**Most of Savannah's buildings are older than the people  
or businesses or events that occupy them.**





**Squares?**





**Streets?**

**What Makes Savannah, Savannah?**

**Squares?**

**Streets?**

**Sort of.....but.....**



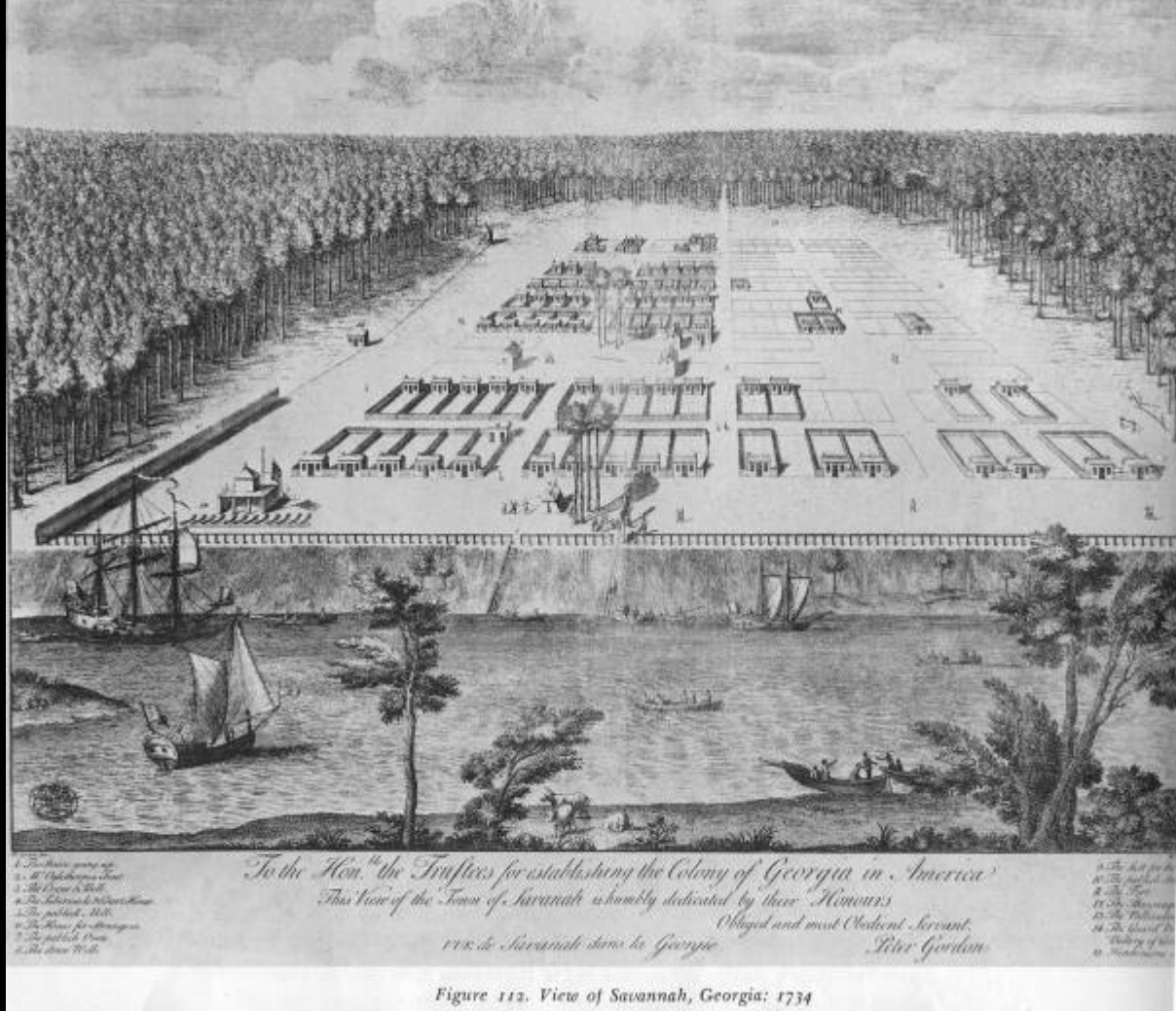


Figure 112. View of Savannah, Georgia; 1734

**What makes Savannah, Savannah?**

**Oglethorpes simple subdivision of land into lots and blocks and streets.**



**URBAN DESIGN**

**=**

**CITY DESIGN**

**FRAMEWORKS**

**Subdivision of Land into Public and Private Domains**

*The Regulating Plan and Subdivision Regulations*

**DESIGN WITHIN FRAMEWORKS**

**Design of the Public Domain: Streets, Public Landscapes, Public Buildings**

*Public Works Design and Public Works Standards*

**Design of the Private Domain: Private Buildings and Private Landscapes**

*Design Guidelines, Codes and Zoning*

**ARRANGEMENT OF ACTIVITIES WITHIN FRAMEWORKS**

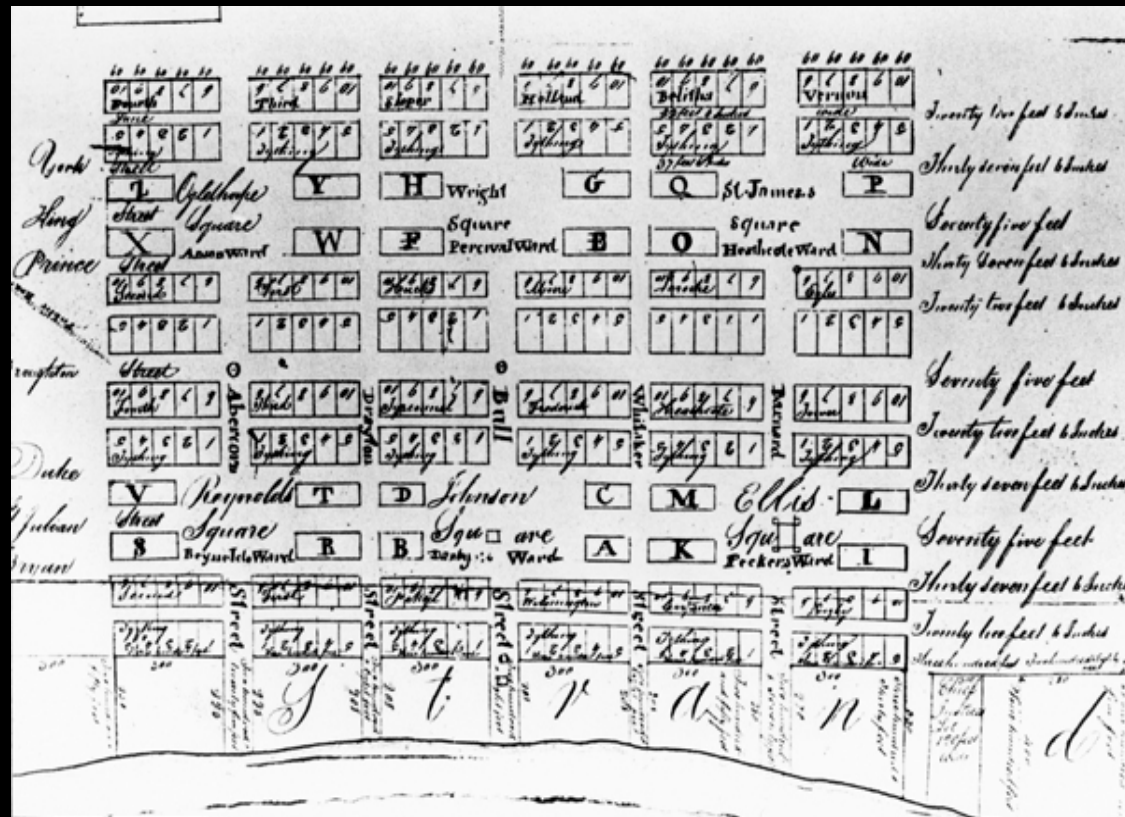
**Land Uses, Building Uses, Movements, Events**

*Zoning, Permits, Licenses, Regulations*

# FRAMEWORKS

## Subdivision of Land into Public and Private Domains

### *Subdivision Regulations and the Regulating Plan*



Savannah 1733

A plat of the Towne belonging to York Co.  
By Lawrence Smith Surveyor

75	71 Michele Gardner	67 Gardner	63 Gardner	59 Gardner	55 Gardner	51 Gardner
74	69 Gardner	66 Gardner	62 Gardner	58 Gardner	54 Gardner	50 Gardner
73	65 Gardner	63 Gardner	61 Gardner	57 Gardner	53 Gardner	49 Gardner
72	63 Gardner	61 Gardner	59 Gardner	56 Gardner	52 Gardner	48 Gardner

45	39
44	38
43	37

33	27
32	26
31	25

21	15
20	14
19	13

9
8
7

83	81
82	80

79	77
78	76

46	44
45	43

42	36
41	35
40	34

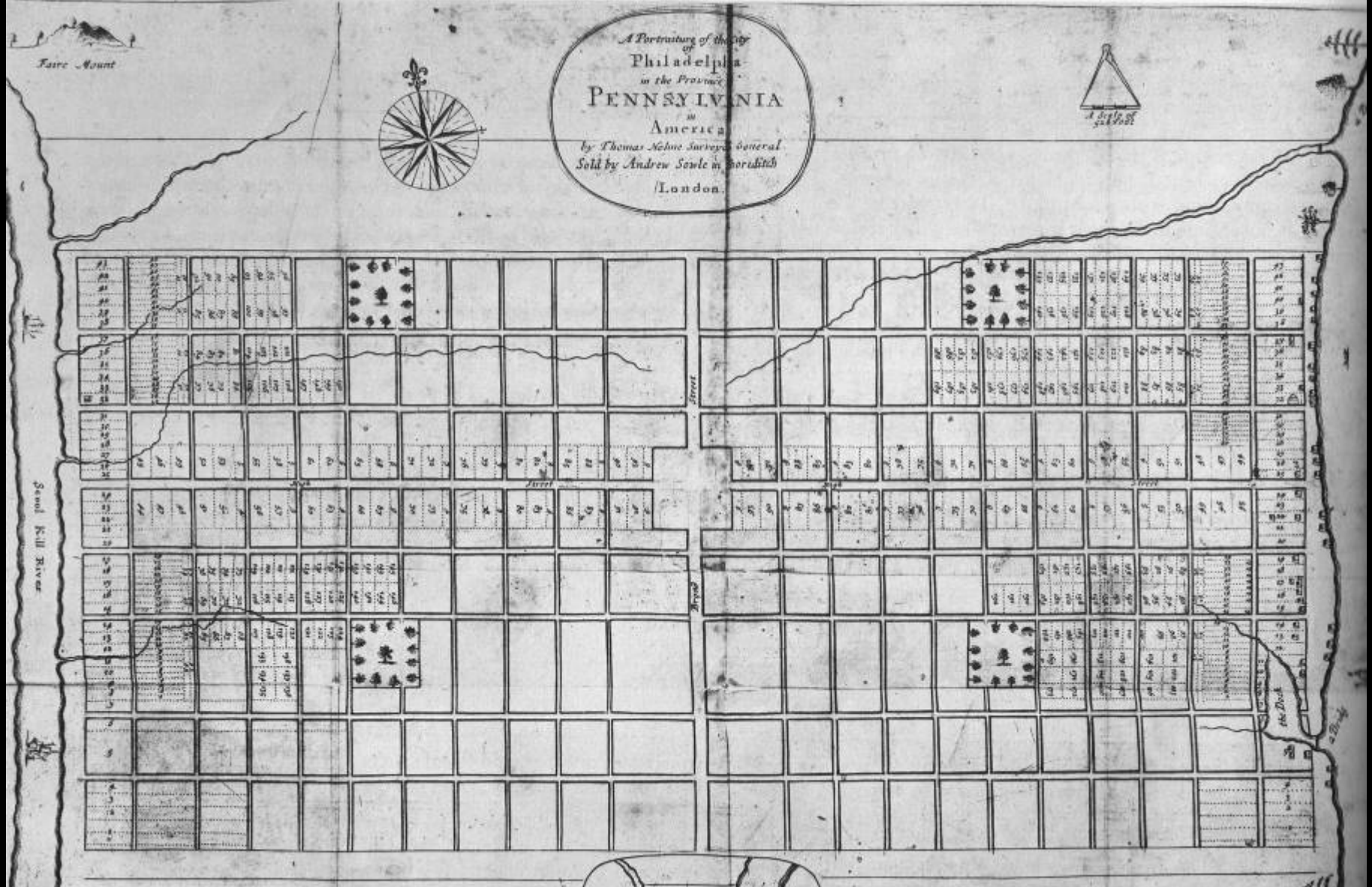
30	24
29	23
28	22

18	12
17	11
16	10

6	3
5	2
4	1

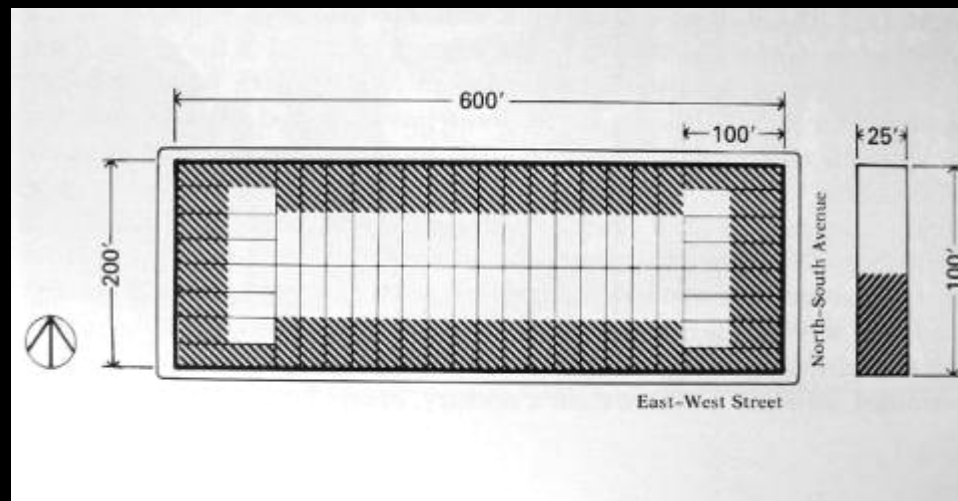
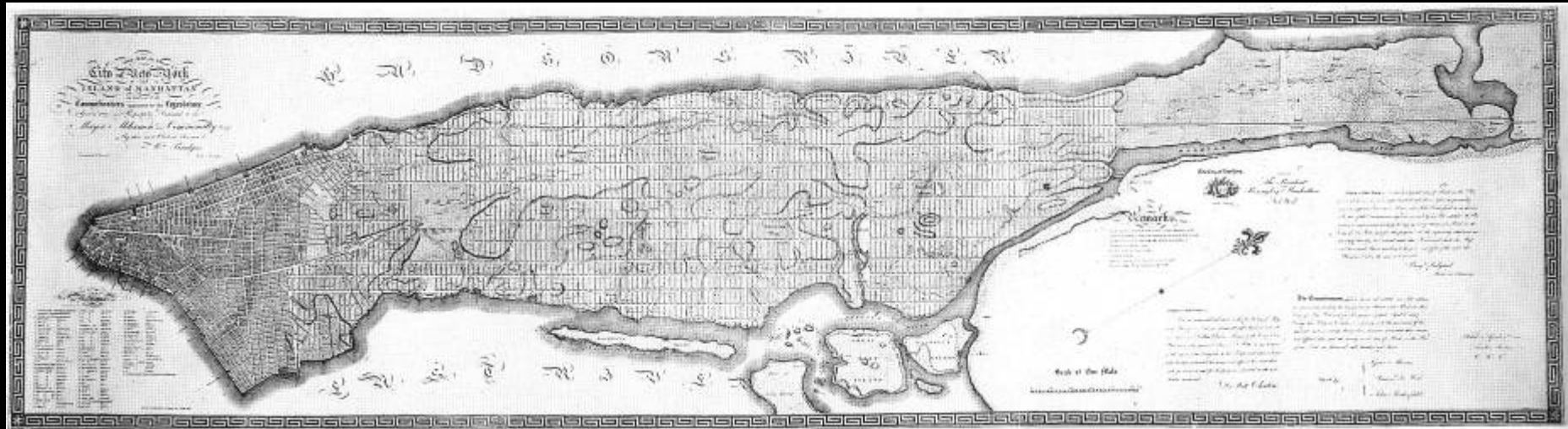
Yorktown, Virginia 1691





**William Penn's Plan for Philadelphia, 1682**





**Commissioners' Plan of Manhattan 1811**



1 INCH = 100 FEET  
SCALE 1"=1000'

PERIMETER MALL



1 INCH = 100 FEET  
SCALE 1"=1000'

EAST POINT



1 INCH = 100 FEET  
SCALE 1"=1000'

NORTH POINT



1 INCH = 100 FEET  
SCALE 1"=1000'

PERIMETER MALL



1 INCH = 100 FEET  
SCALE 1"=1000'

EAST POINT



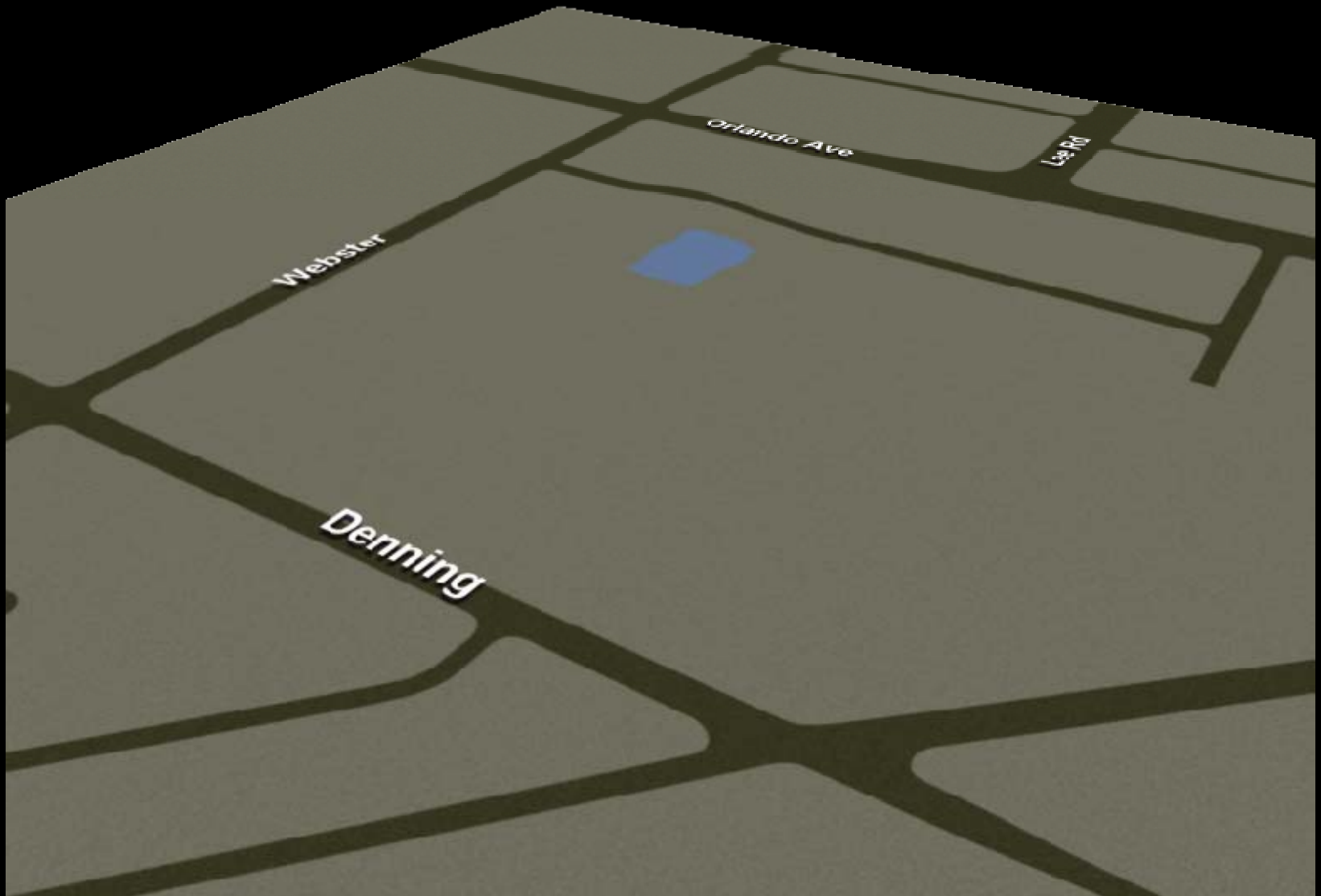
1 INCH = 100 FEET  
SCALE 1"=1000'

NORTH POINT

# Atlanta Subdivisions

*GOAL - Reduce travel delays*

*Network*



GOAL - Reduce travel delays

Network





*Re-evaluate and Refine*





# DESIGN WITHIN FRAMEWORKS

## Design of the Public Domain: Streets, Public Landscapes, Public Buildings

*Public Works Design and Public Works Standards*



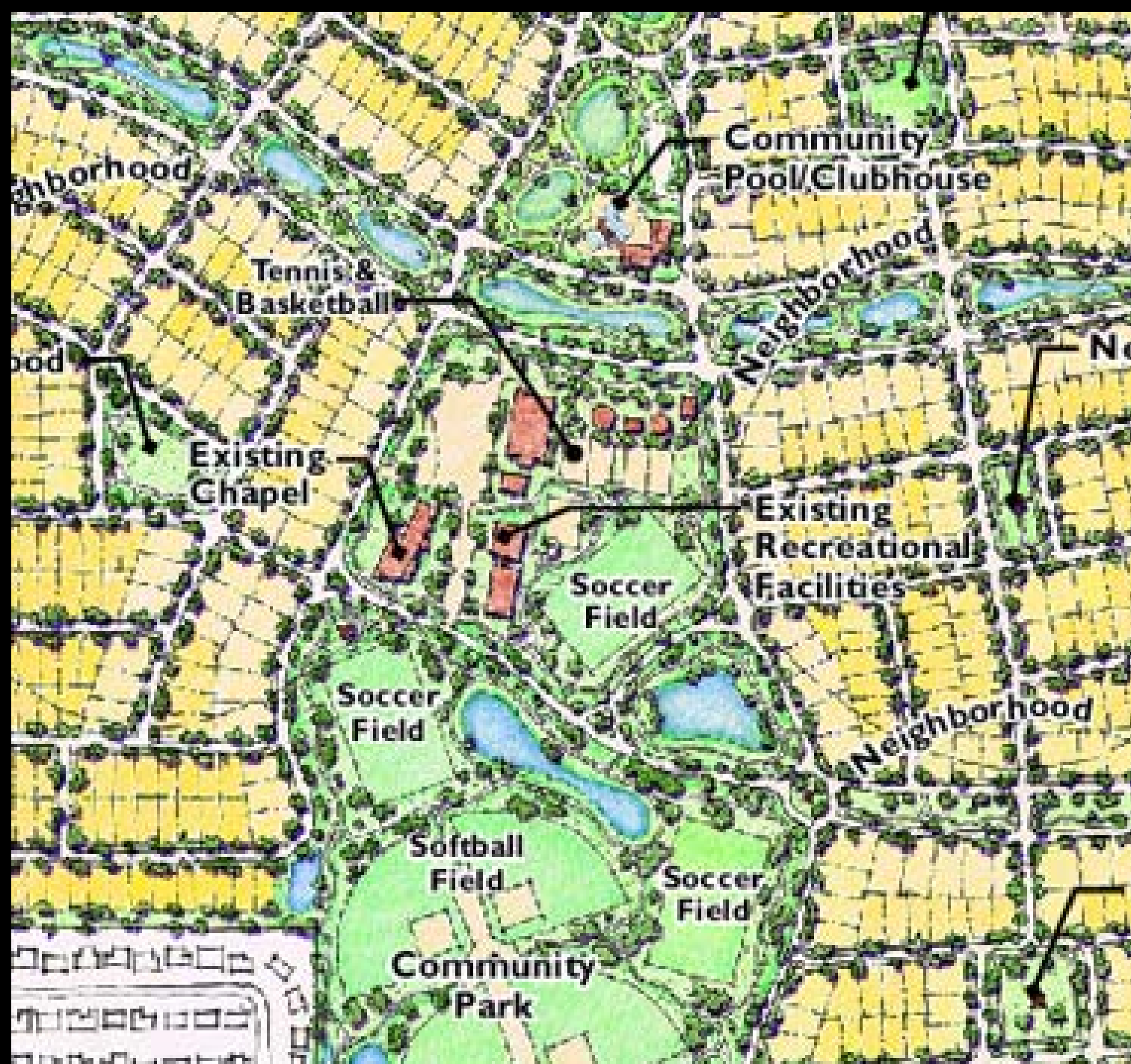
Johnson Square - Savannah















# DESIGN WITHIN FRAMEWORKS

## Design of the Private Domain: Private Buildings and Private Landscapes

*Design Guidelines, Codes and Zoning*

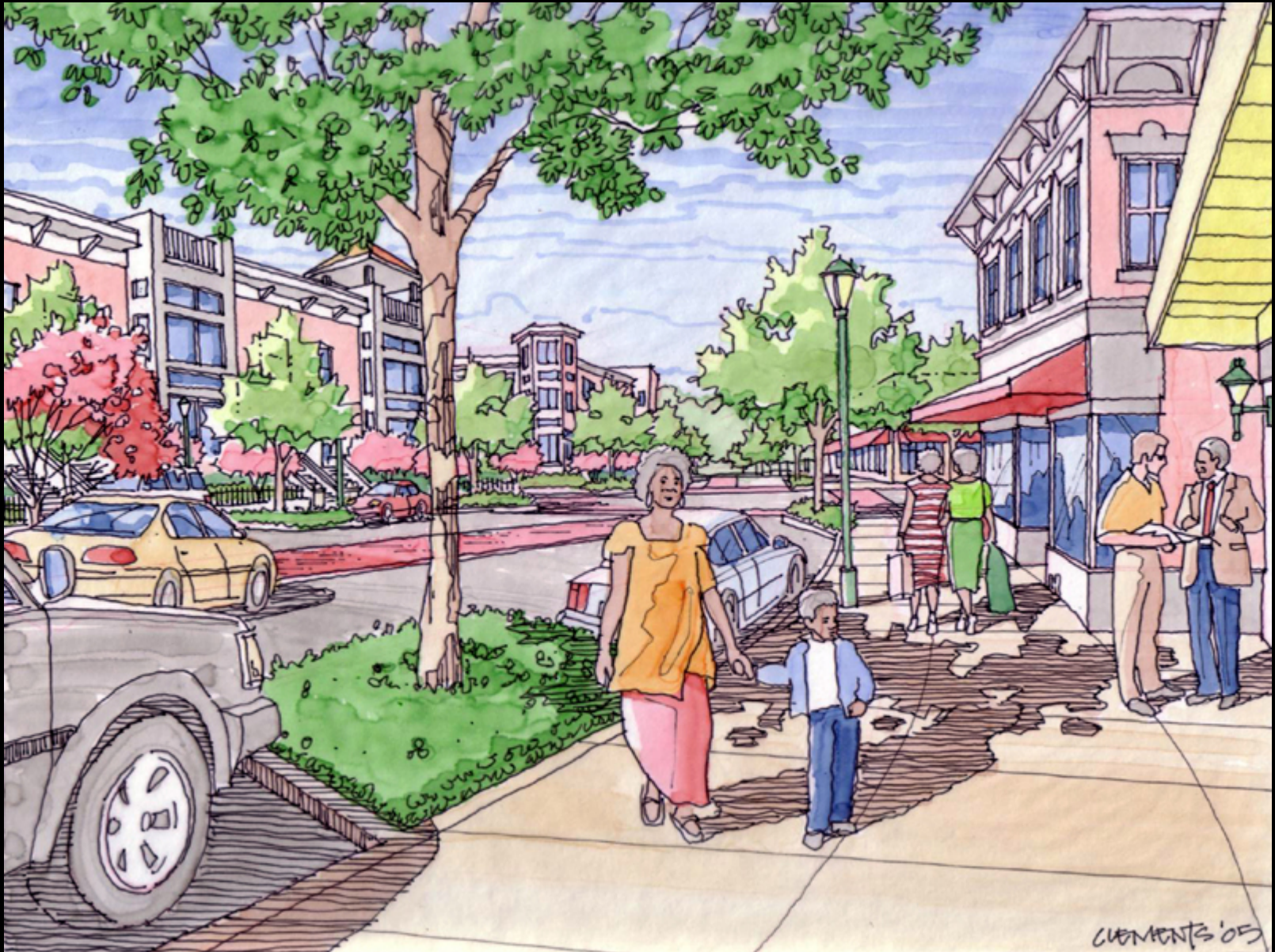








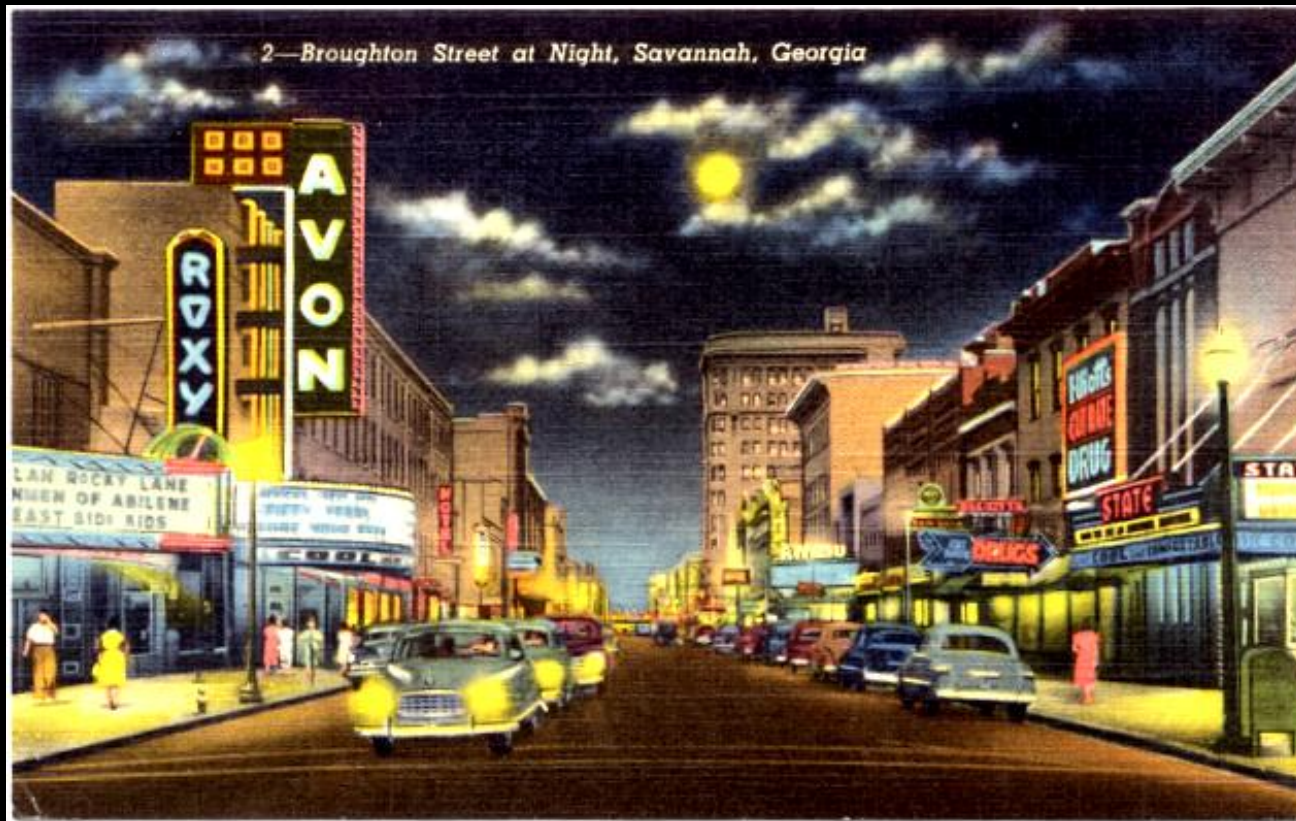
## Campbellton: Ft. McPherson Frontage

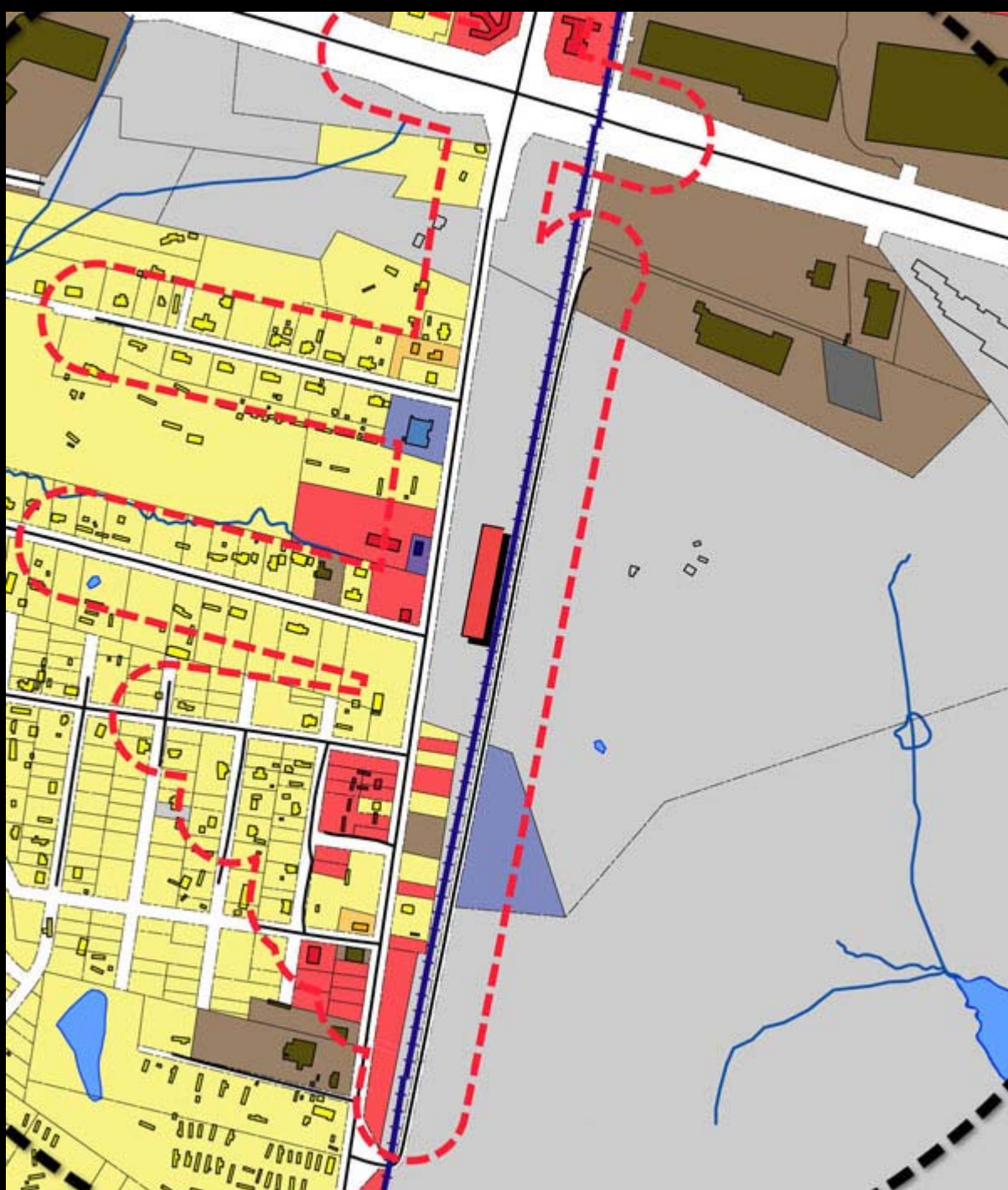




# ARRANGEMENT OF ACTIVITIES WITHIN FRAMEWORKS

**Land Uses, Building Uses, Movements, Events**  
*Zoning, Permits, Licenses, Regulations*













# URBAN DESIGN

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# CITY DESIGN

## FRAMEWORKS

**Subdivision of Land into Public and Private Domains**

*The Regulating Plan and Subdivision Regulations*

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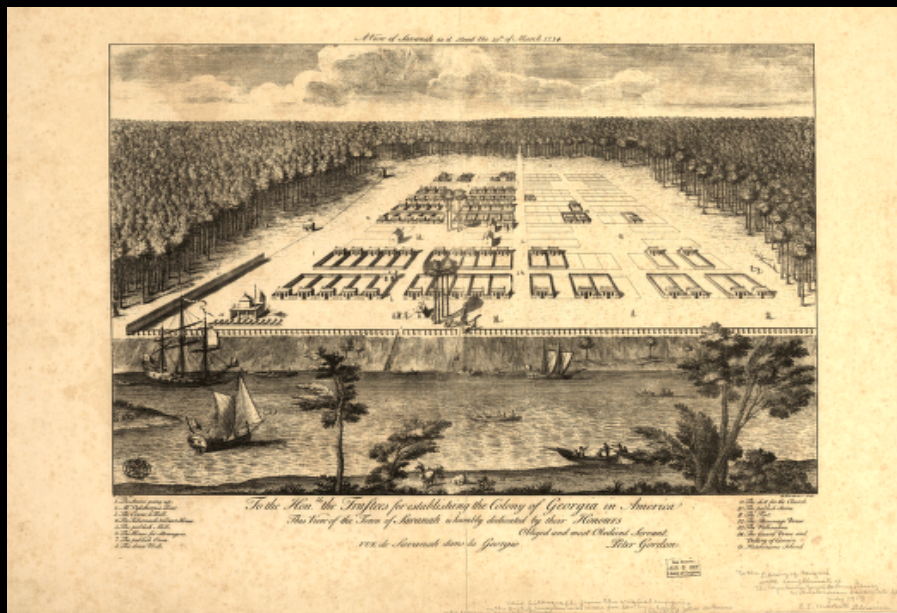
*Zoning, Permits, Licenses, Regulations*



Savannah 1796



Savannah 1837



Savannah 1734



Savannah 1950?





Figure 113. Plan of Savannah, Georgia: ca. 1740

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# CITY DESIGN

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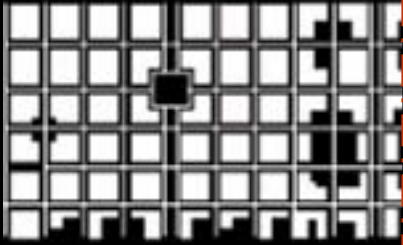


# Understanding Context:

**Understanding Context:**

**Built Form & Pattern**

# Built Form Context: The Transect



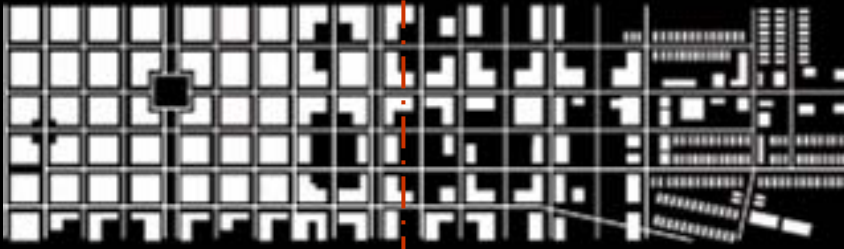
## High Intensity Urban Core

- Downtown  
Best connected place in the region
- Well-established and connected street pattern
- Densities supportive of transit
- Transit ranges from small local stations to large multi-modal stations
- Strong TOD development market





# Built Form Context: The Transect



## High Intensity Urban Core

## Established Urban Neighborhoods

- Uptown  
Best connected place in the region
- Well-established and connected street pattern
- Densities supportive of transit
- Transit ranges from small local stations to large multi-modal stations
- Strong TOD development market

- Includes South End, NoDa, Plaza Midwood, Elizabeth, and West Morehead
- Also includes Mooresville, Davidson, Cornelius, and Huntersville
- All have individual character built-up over time
- All feature a connected block system and transit-supportive densities
- TOD development market may need assistance.



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## First-Ring Suburban Neighborhoods

- Most common built form
- These areas are well developed, but lack orientation to the public realm
- Access usually comes from a few large roads
- Densities tend to be below transit-supportive levels.
- Few centers of activity
- TOD development market varies, may need assistance



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## New Suburban and Greenfields

- Outermost edge of the transit region
- Areas are quickly developing
- Connections are limited; but opportunities abound
- Densities are well below transit-supportive levels
- Stations located here will attract riders from a larger area
- No existing centers of activity
- TOD development varies.





# Recognizing Patterns: Urban or Village





# Recognizing Patterns: Suburban Strip





# Recognizing Patterns: Suburban Strip





# Recognizing Patterns: Exurban Commercial





# Recognizing Patterns: Exurban Residential



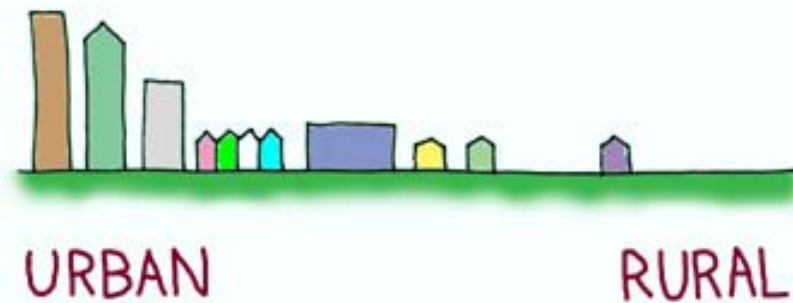


# Recognizing Patterns: Rural & Agricultural



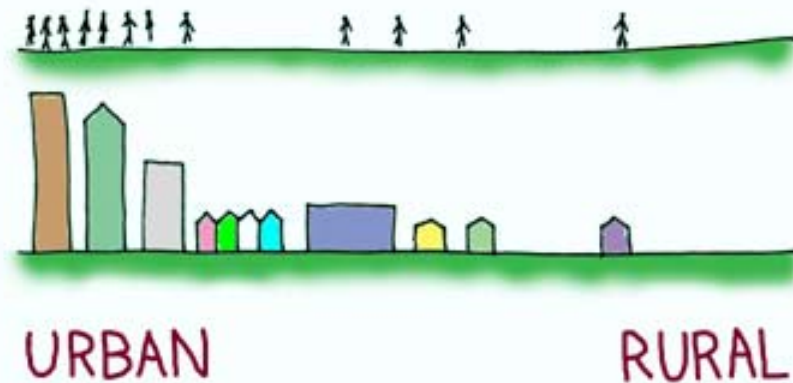


# The Transect & Transportation Design



# The Transect & Transportation Design

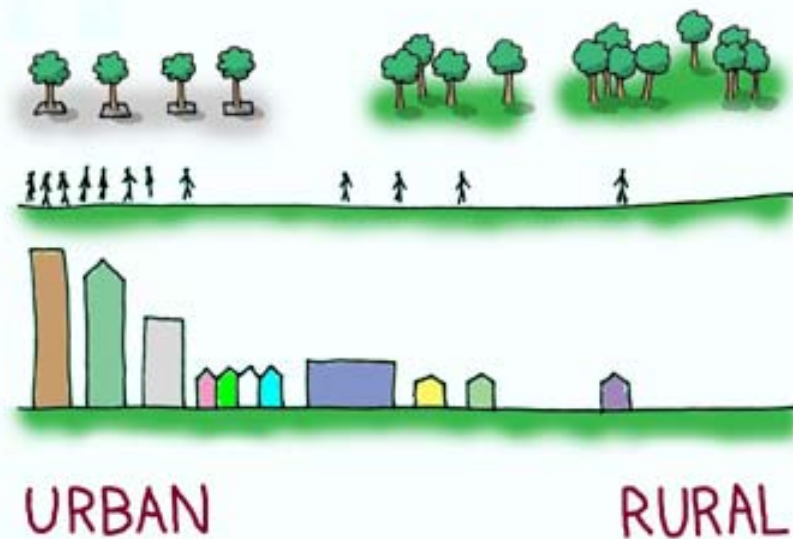
## Density & Pedestrians



# The Transect & Transportation Design

**Streetscape & Landscape**

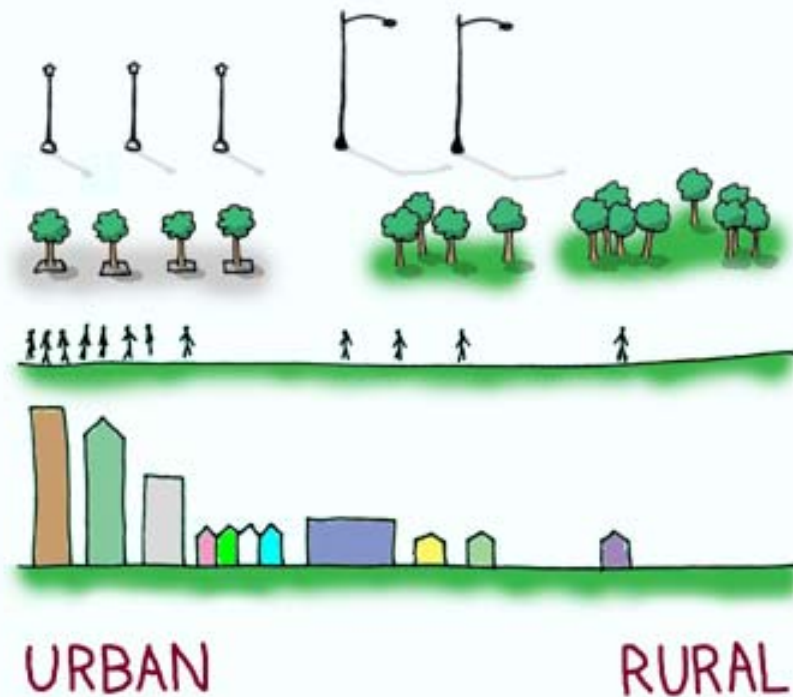
**Density & Pedestrians**





# The Transect & Transportation Design

**Street Lighting**  
**Streetscape & Landscape**  
**Density & Pedestrians**



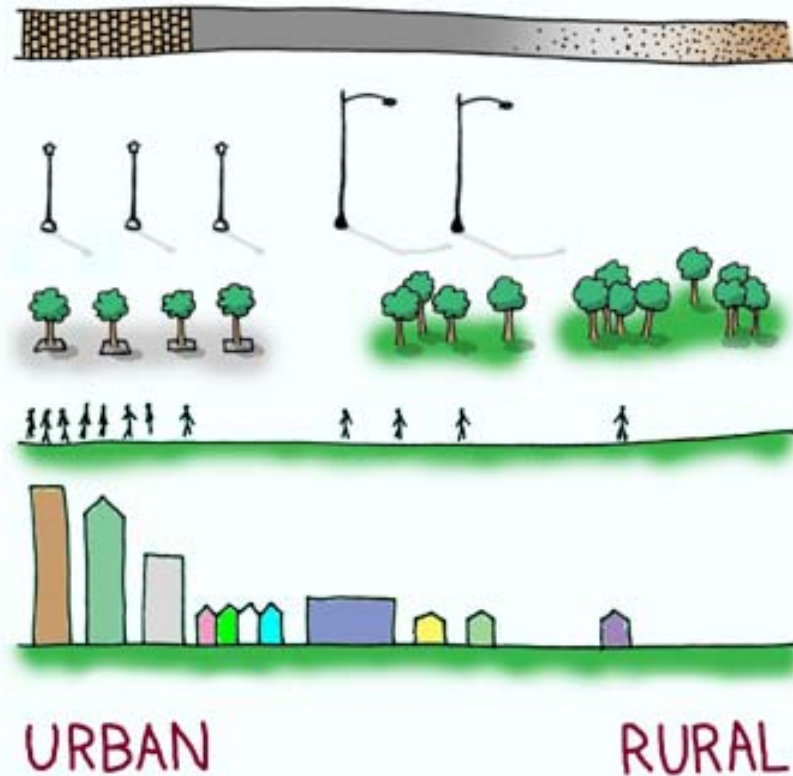
# The Transect & Transportation Design

Road Design

Street Lighting

Streetscape & Landscape

Density & Pedestrians



# The Transect & Transportation Design

**Curb & Edge Conditions**



**Road Design**



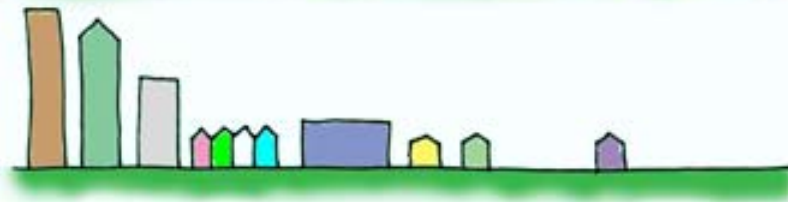
**Street Lighting**



**Streetscape & Landscape**



**Density & Pedestrians**

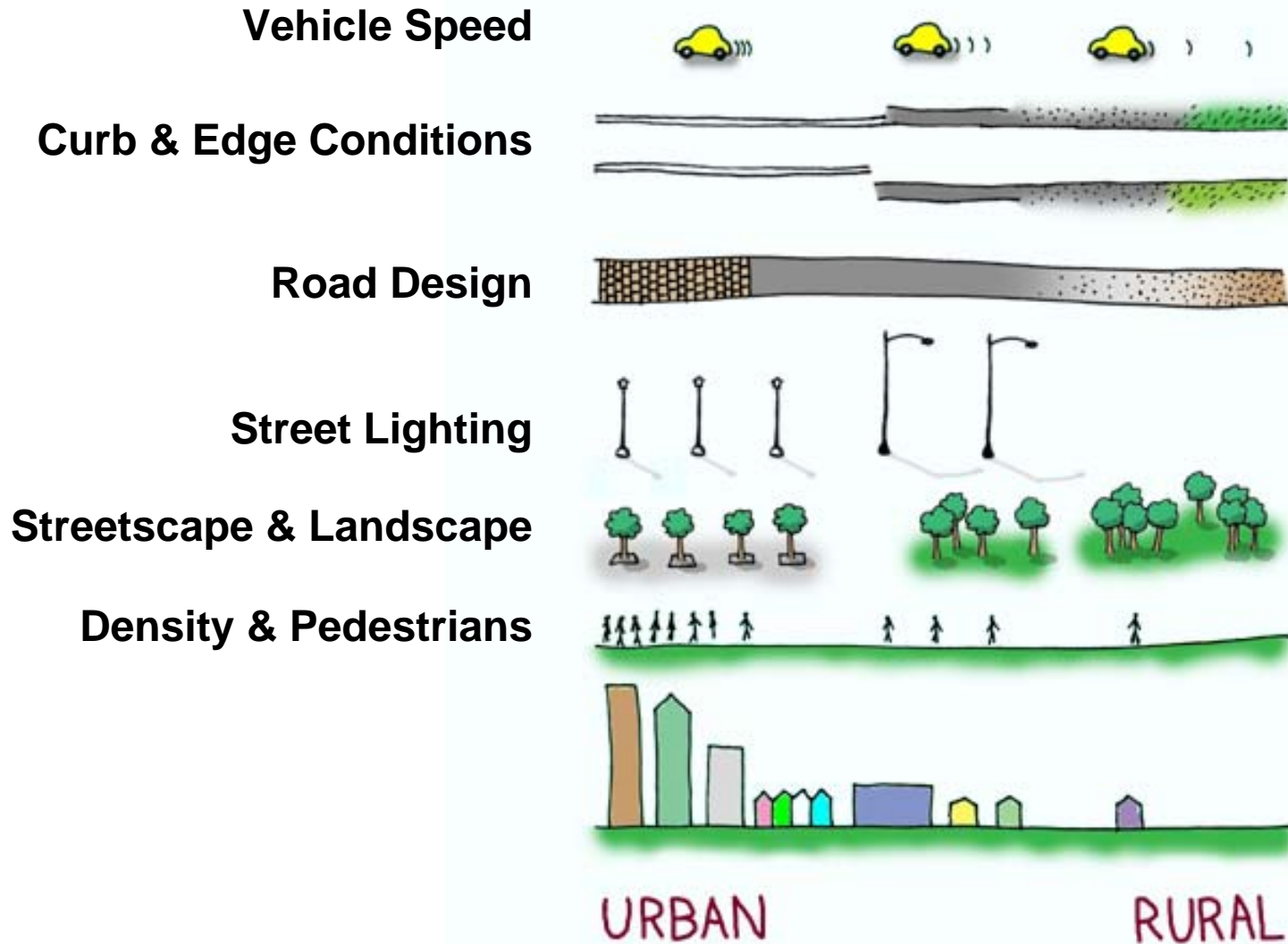


URBAN

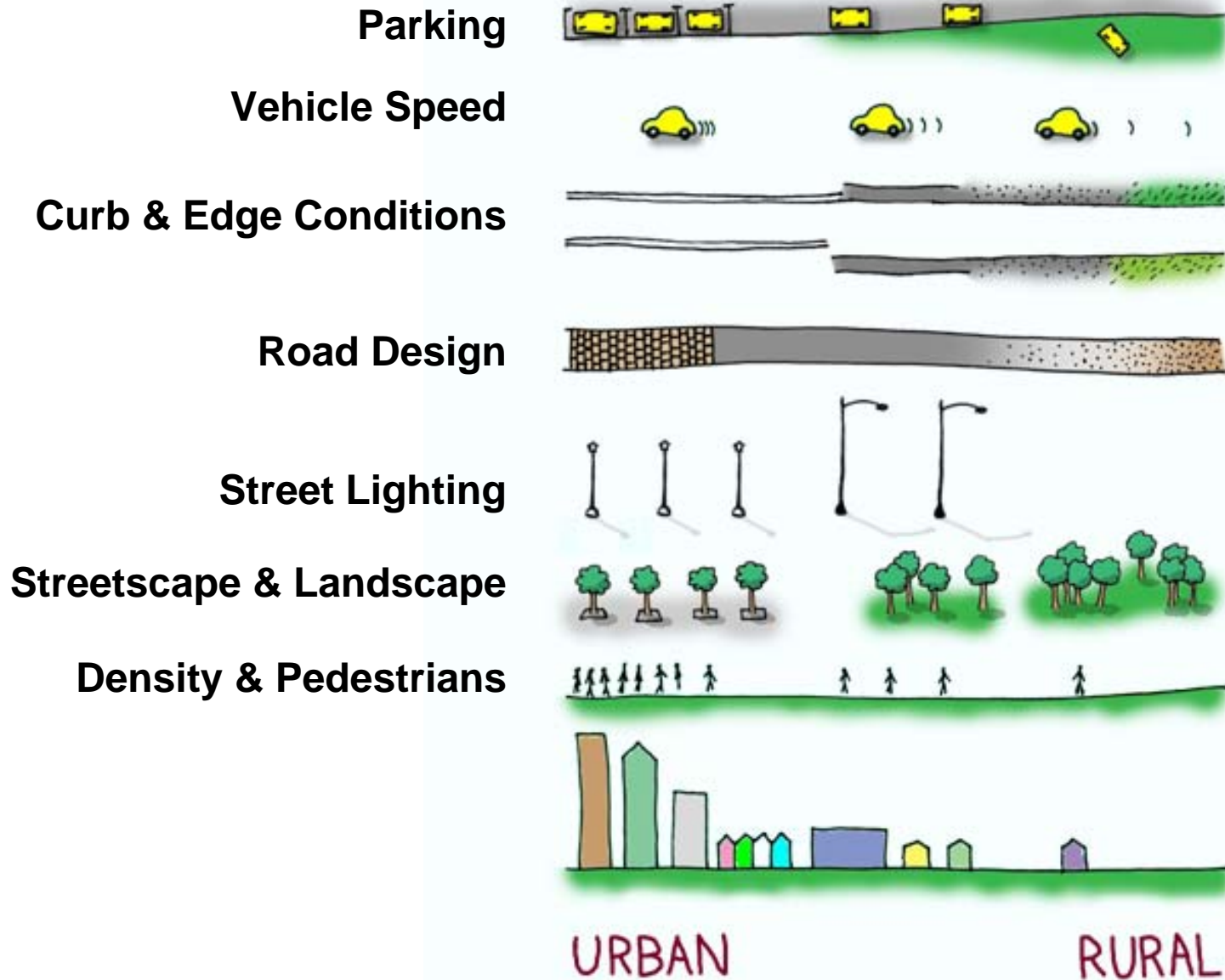
RURAL



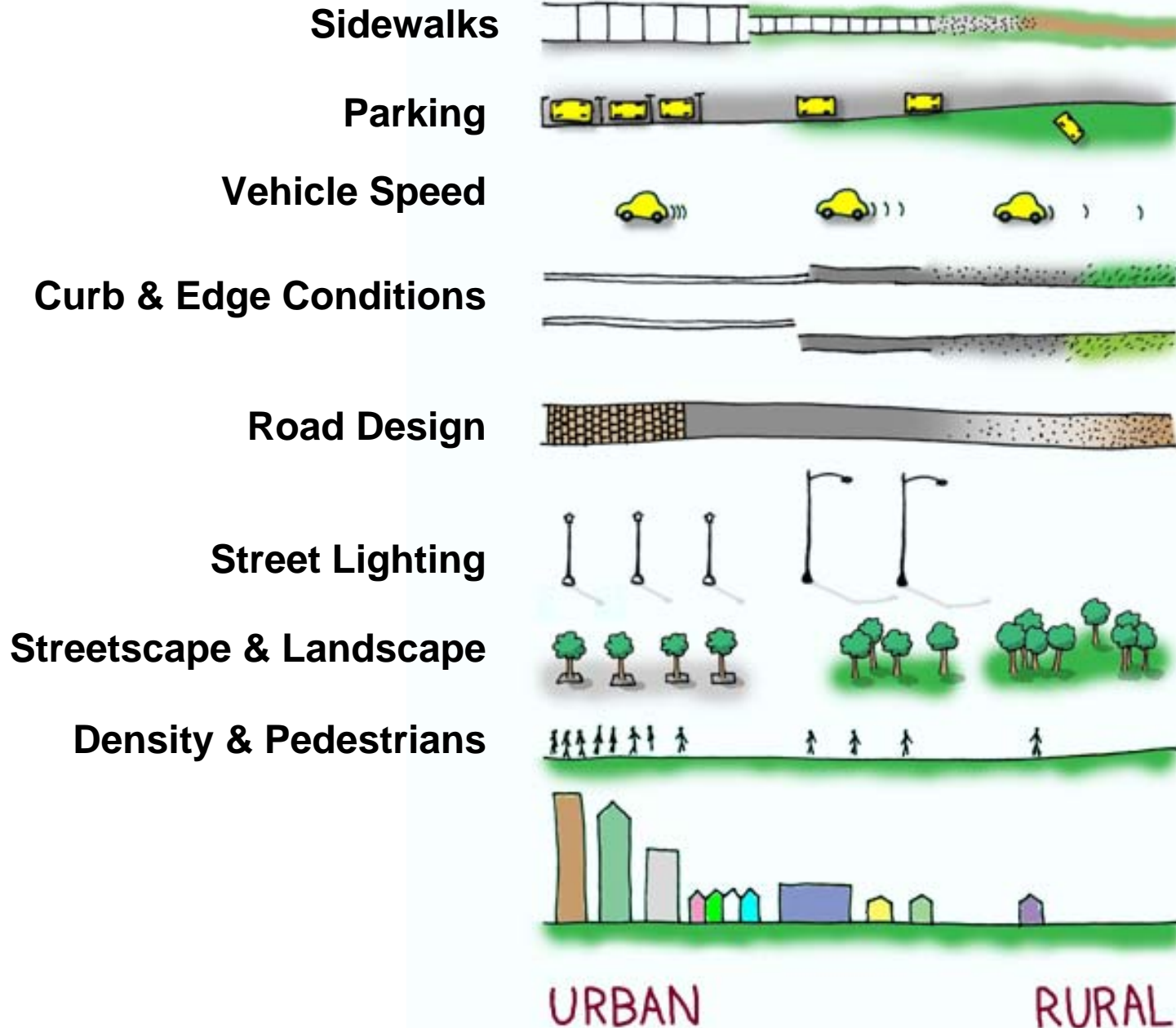
# The Transect & Transportation Design



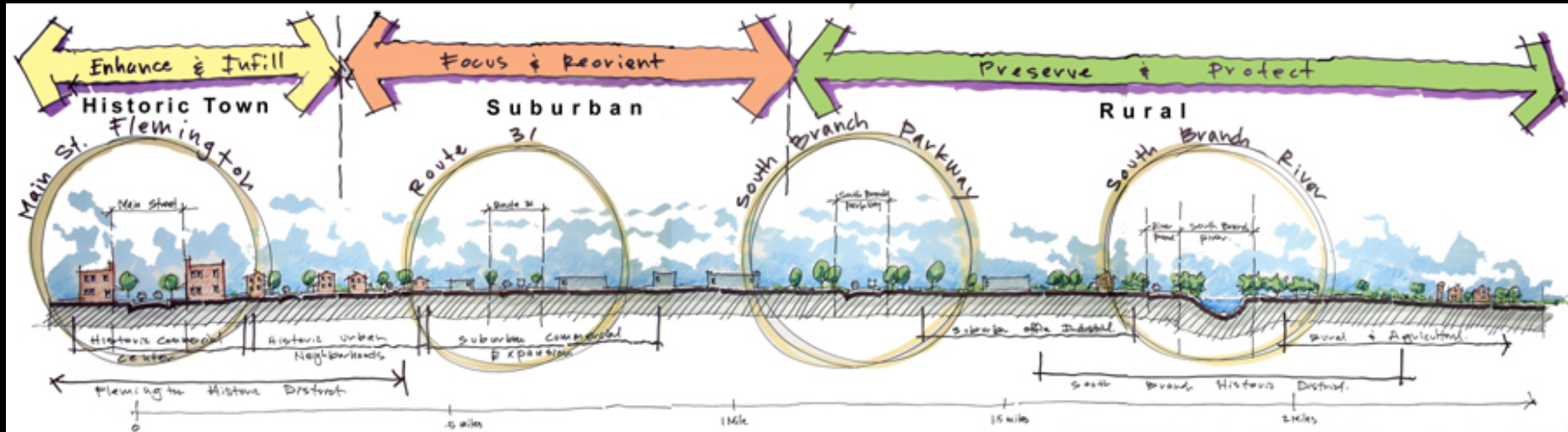
# The Transect & Transportation Design



# The Transect & Transportation Design







Historic Town (Flemington)

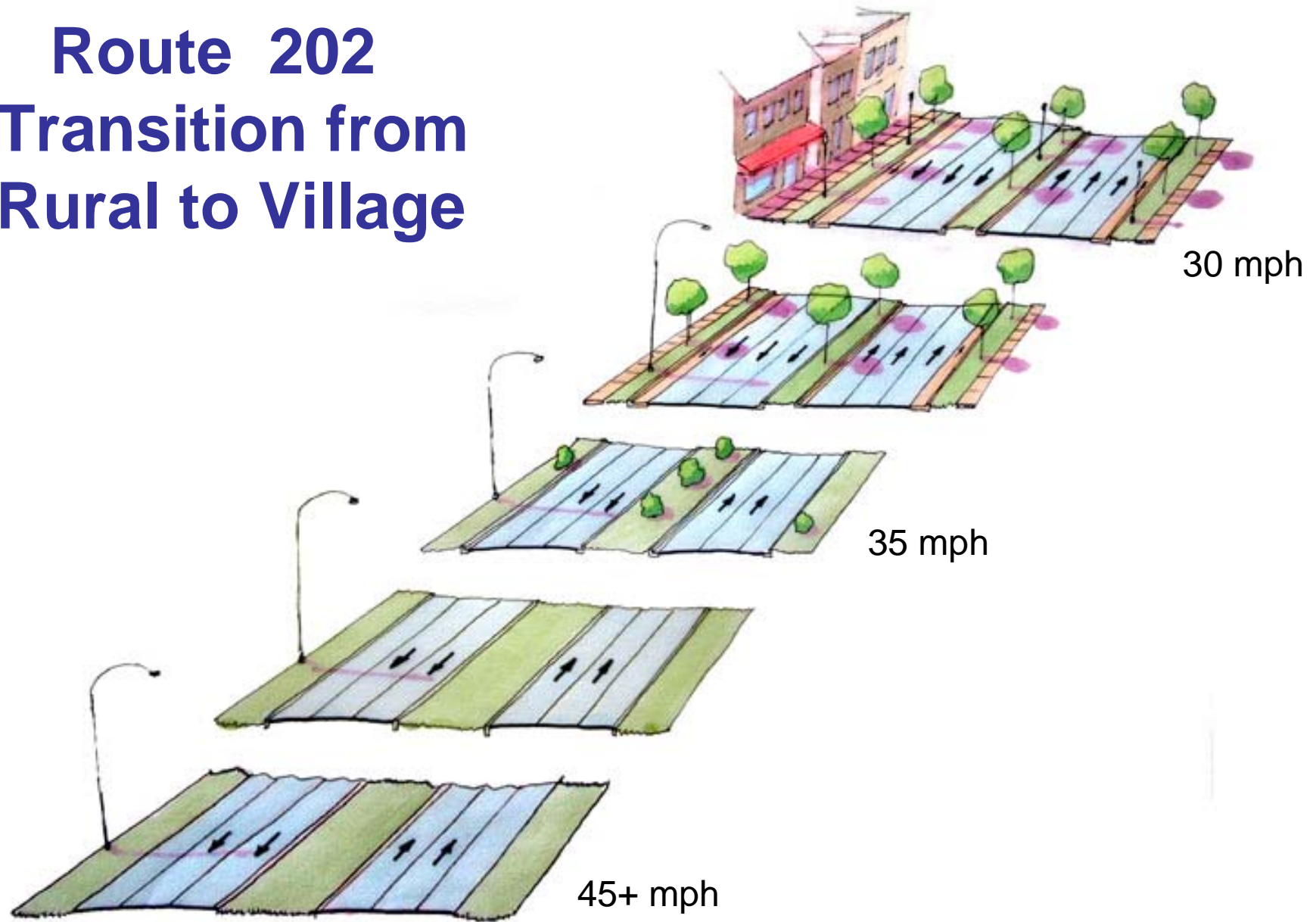
Suburban (Route 31)

Rural (Raritan River)



# Route 202

## Transition from Rural to Village



# Building Figure Ground



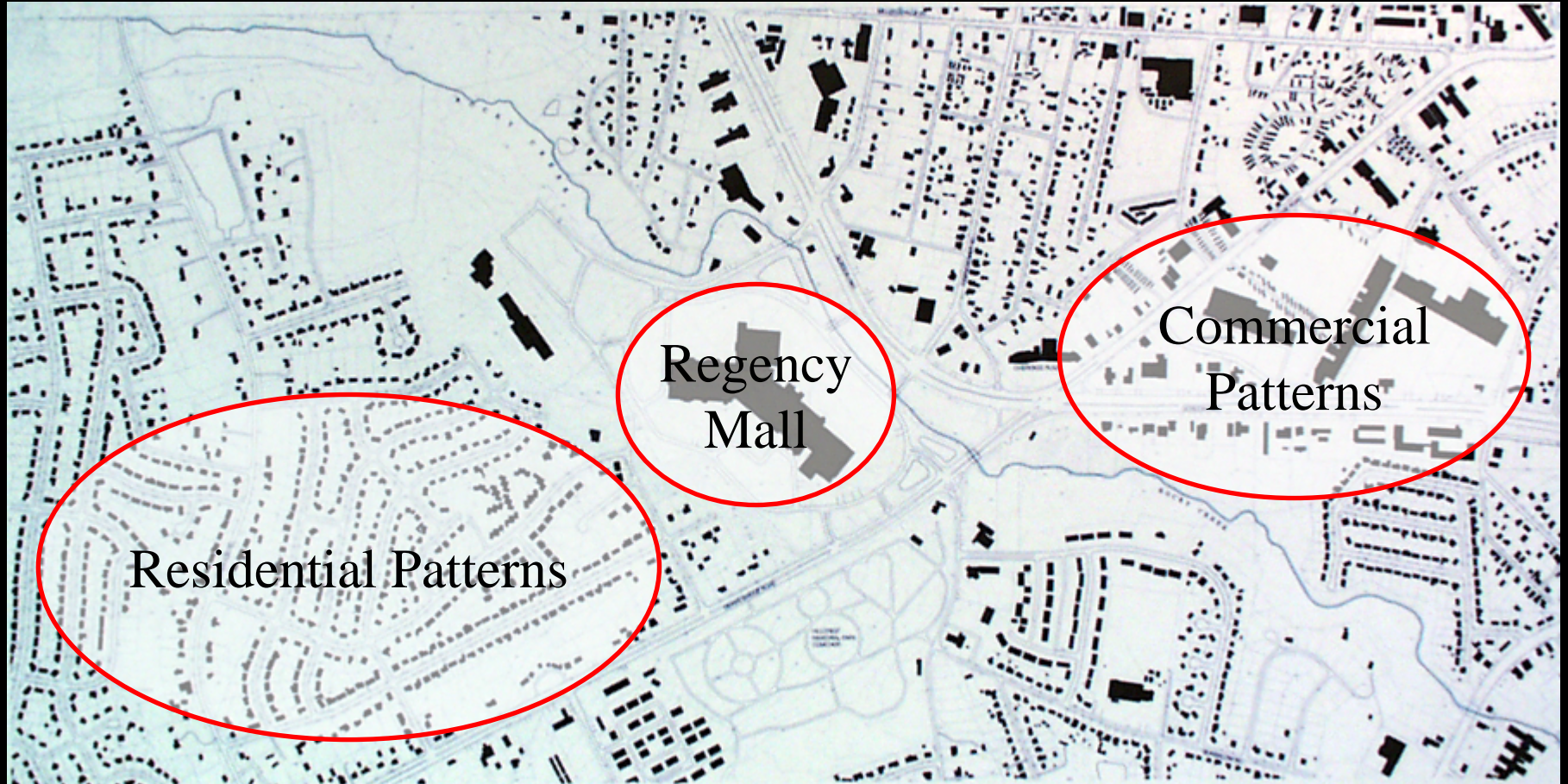


# Building Figure Ground

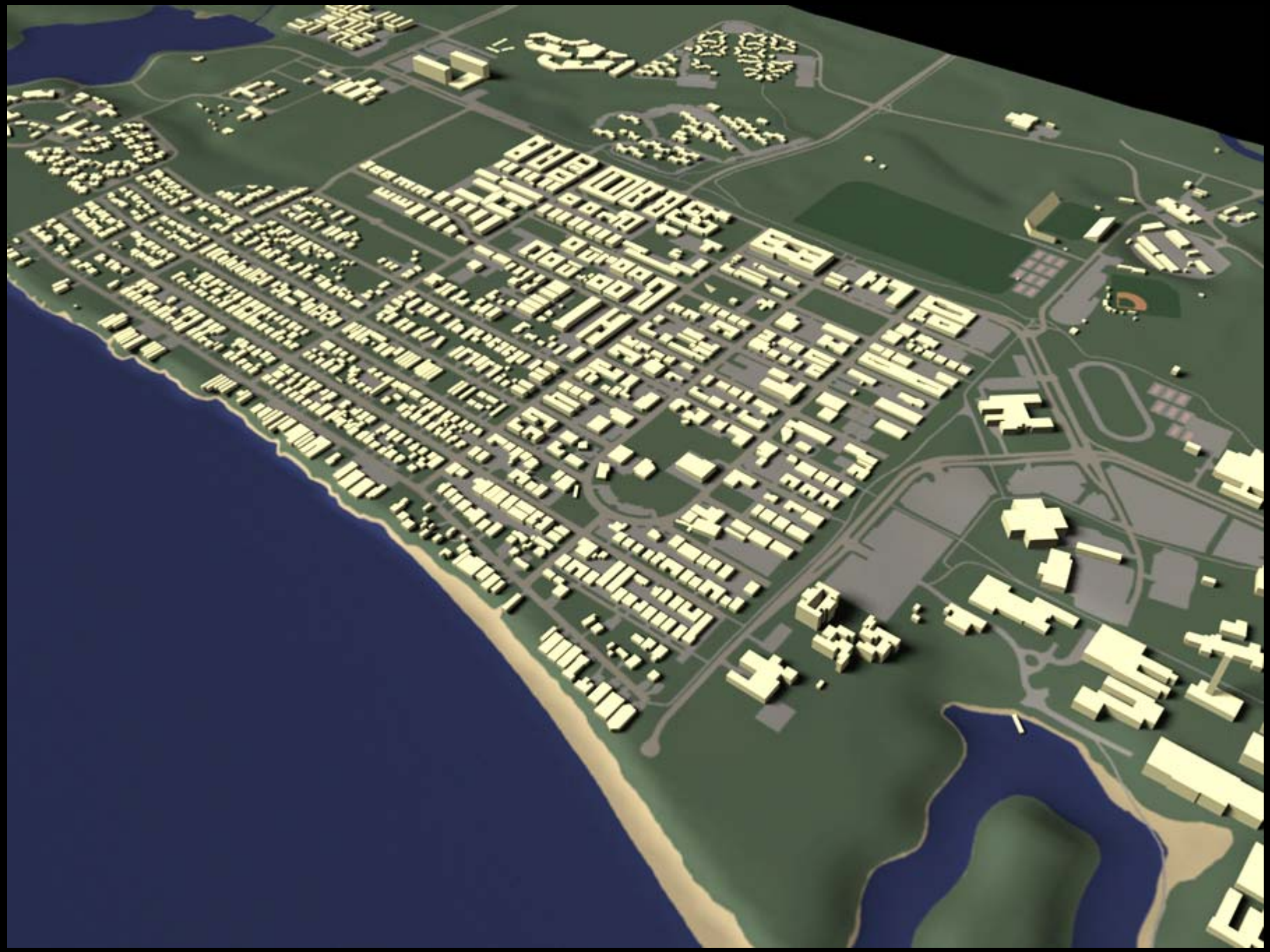




# Building Figure Ground



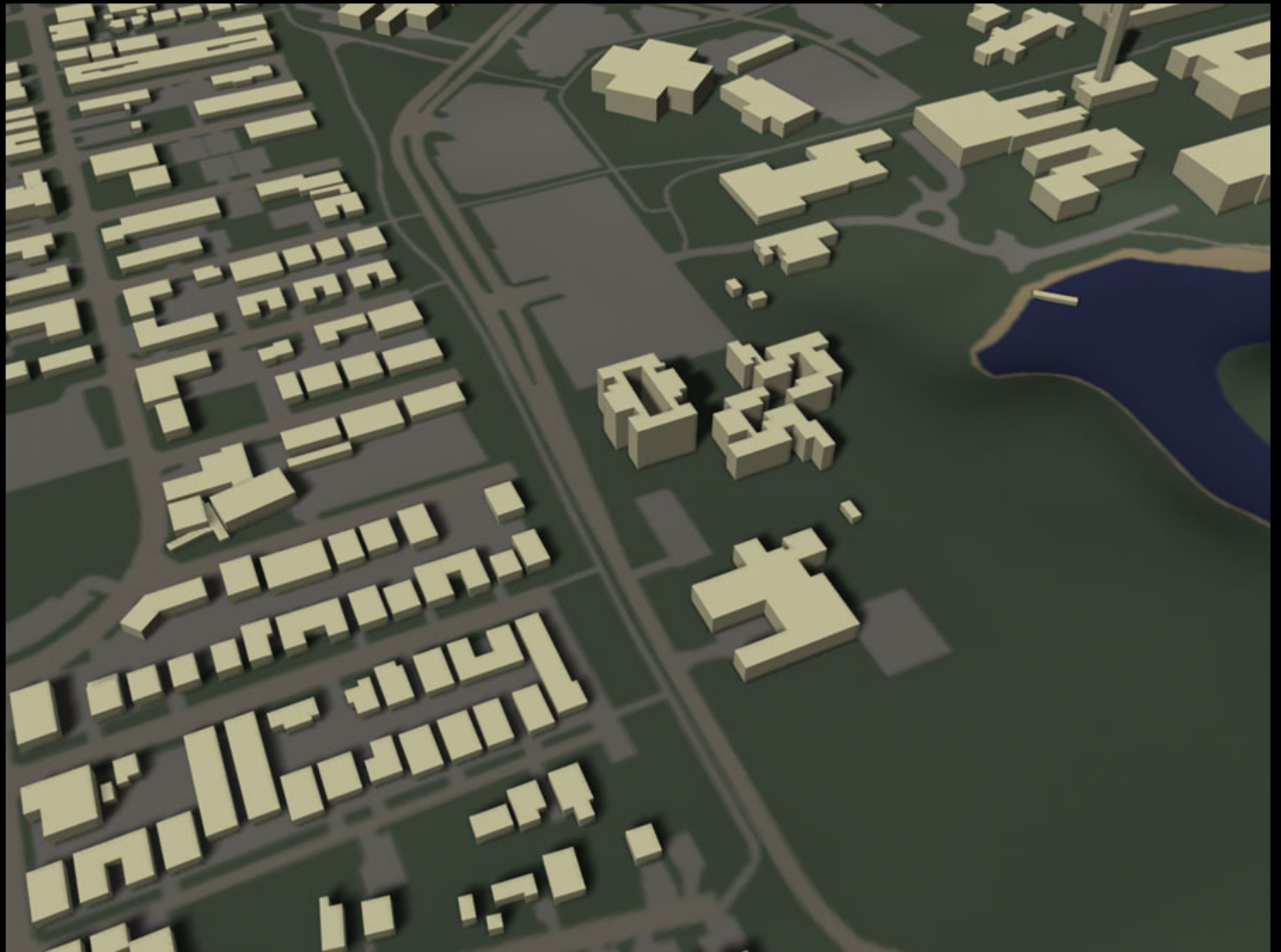


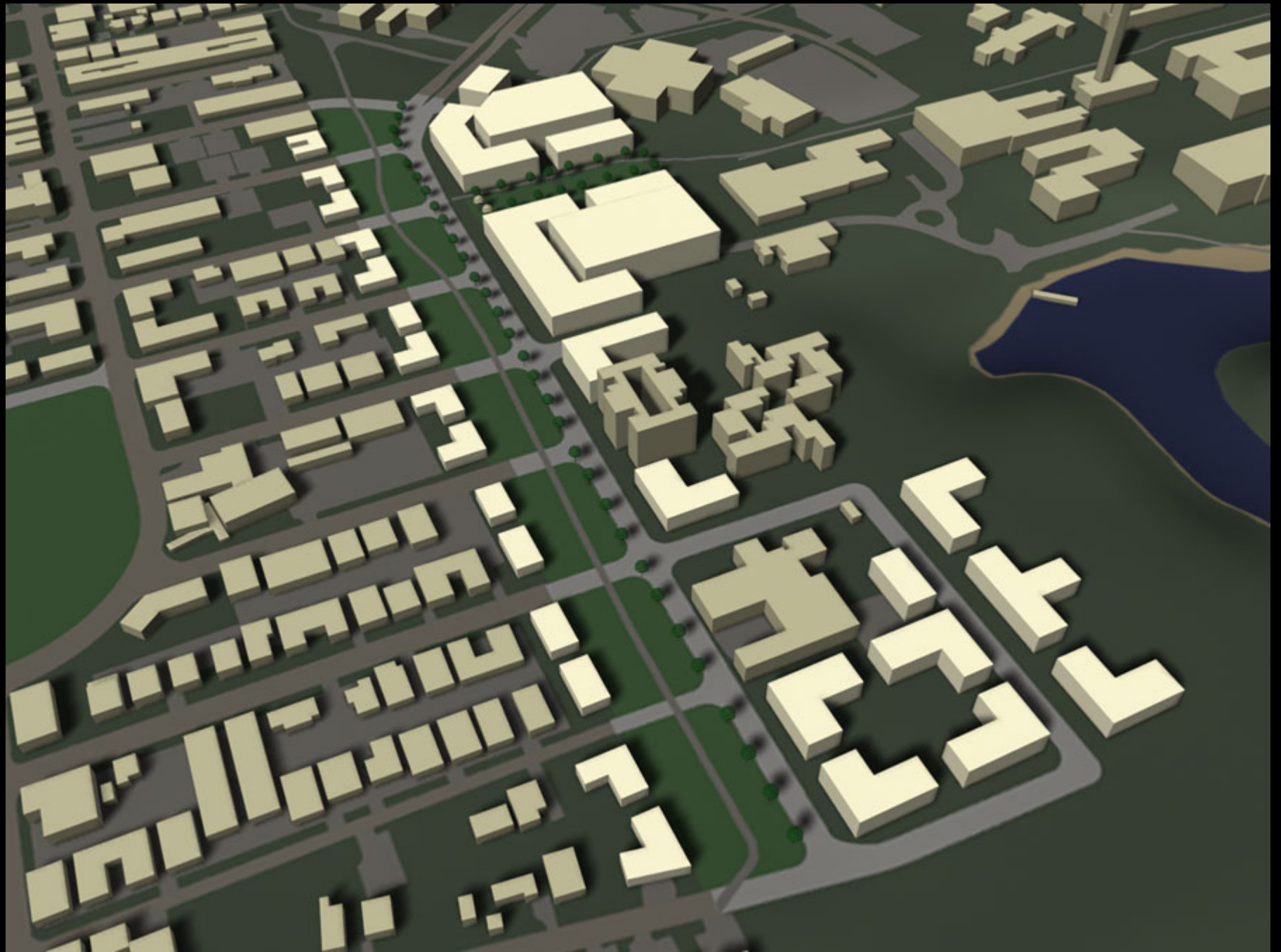




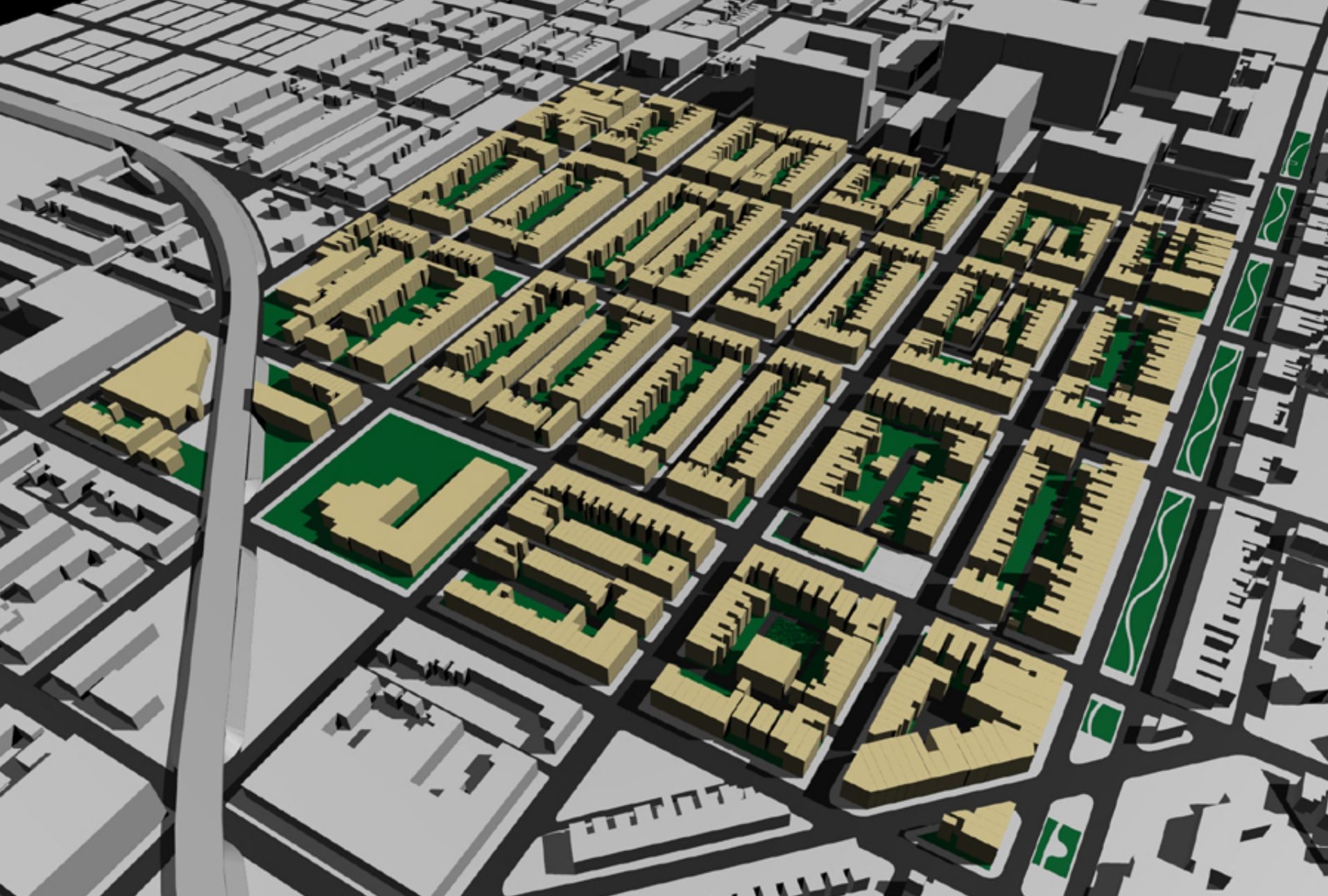






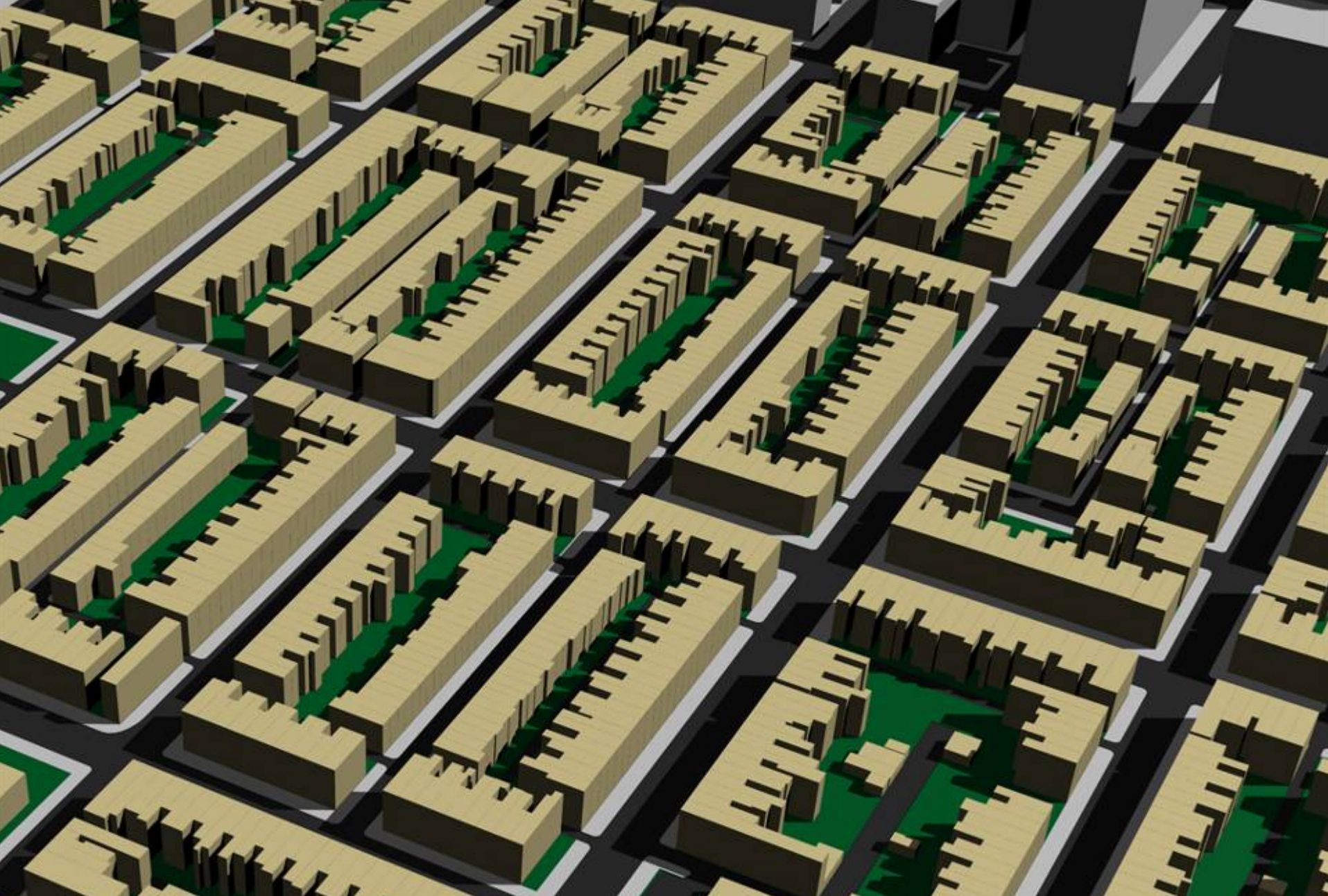




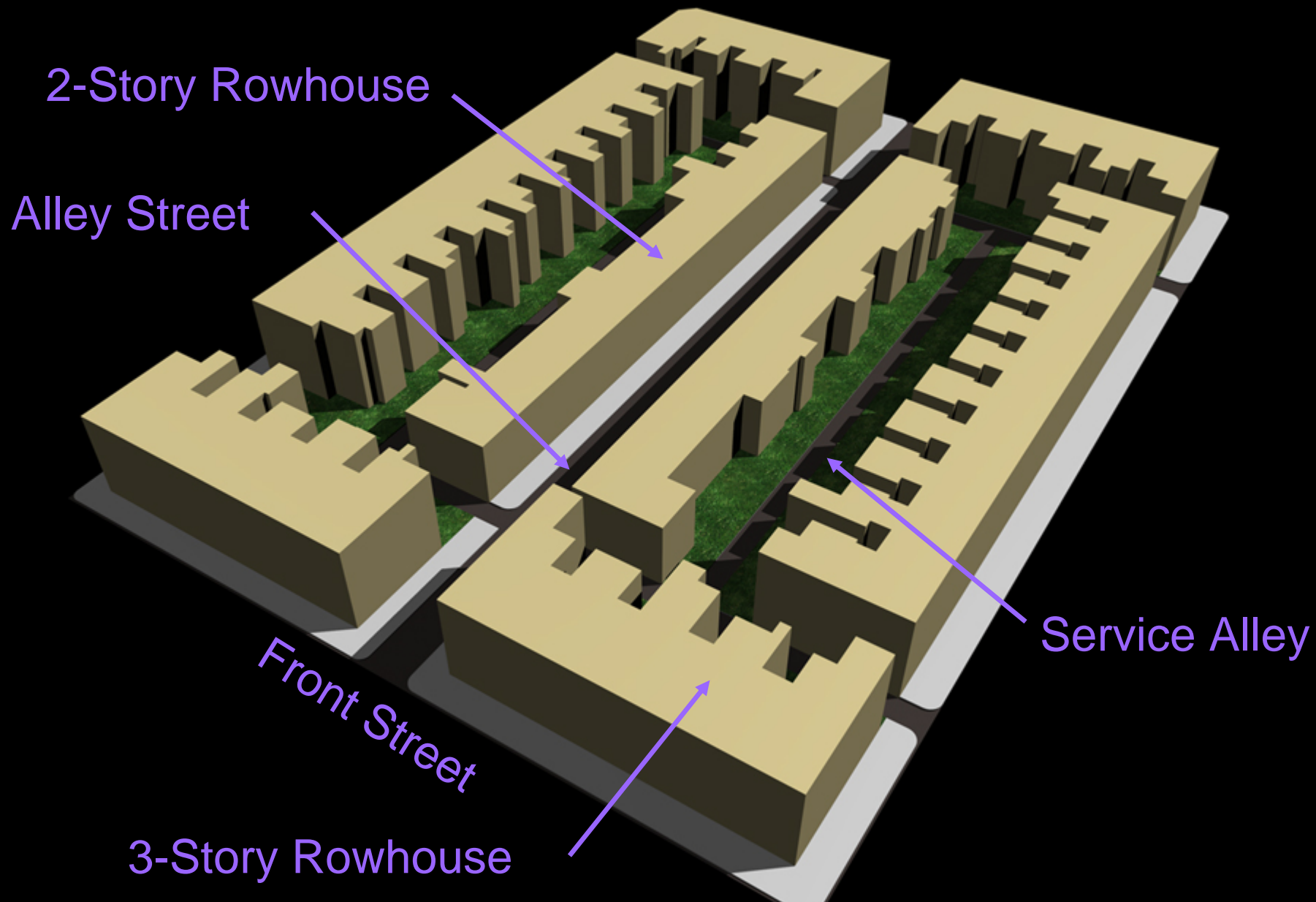


Middle East Neighborhood: **Existing Development Pattern**



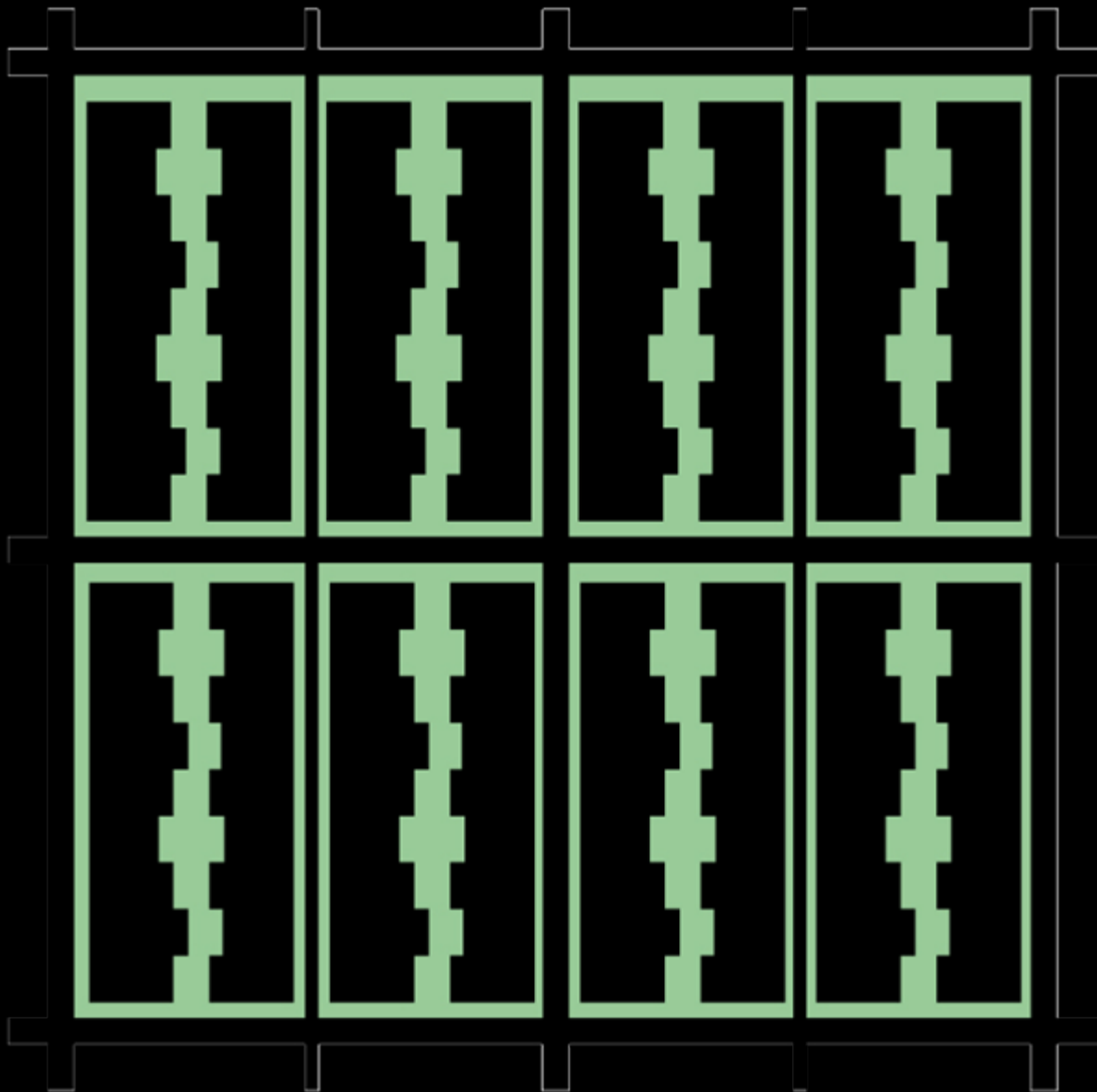


The Baltimore Rowhouse: **Neighborhood Pattern**



The Baltimore Rowhouse: **Existing Rowhouse Block**





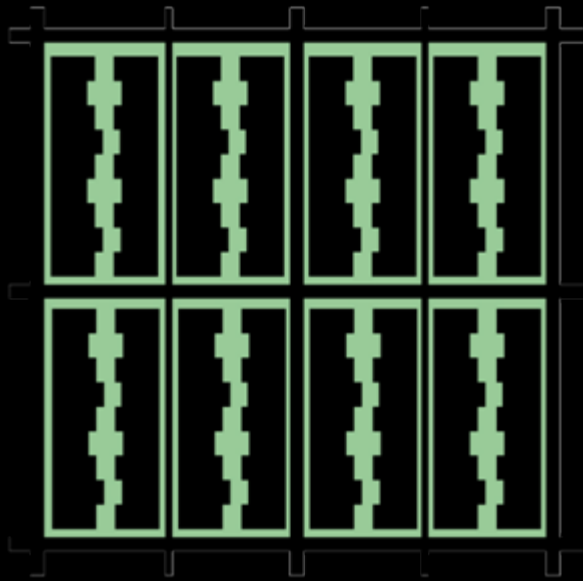
- No Public Open Space
- High Density
- Little Private Open Space
- No Off-Street Parking

Design Strategy: **Current Development Pattern**



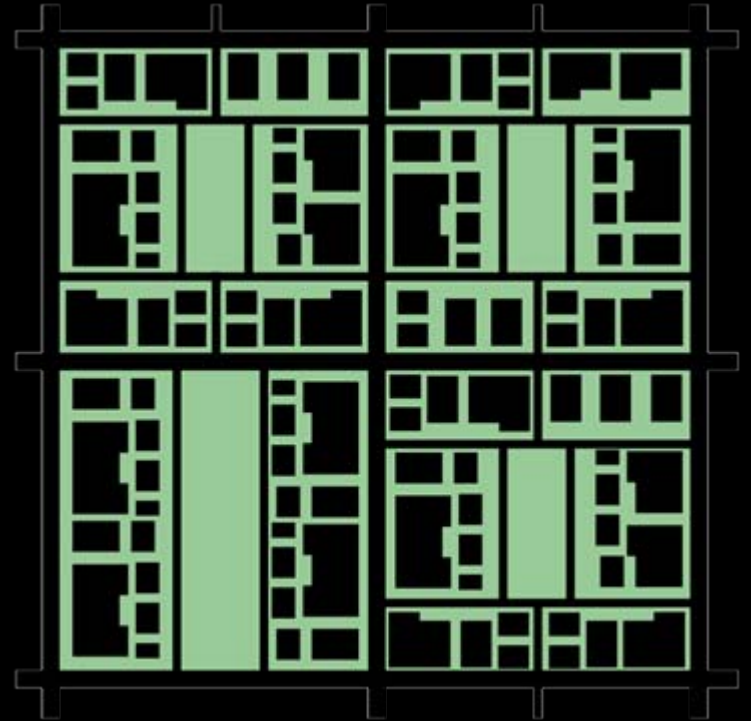
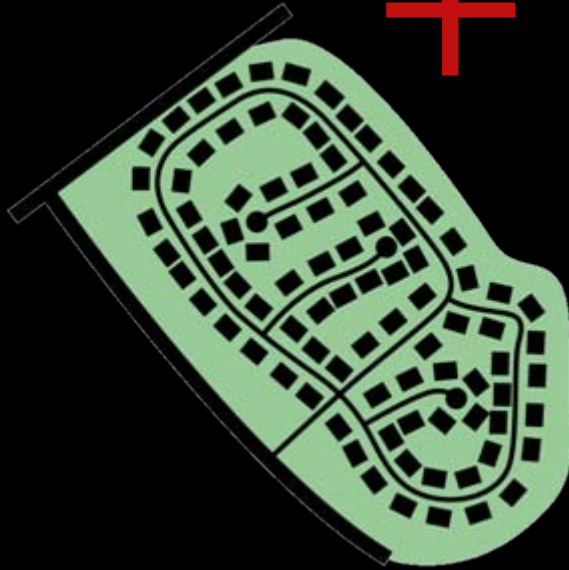
- Little Public Open Space
- Low Density
- Lots of Private Open Space (yards)
- Lots of Off-Street Parking (garages)

Design Strategy: **Suburban Development Pattern**



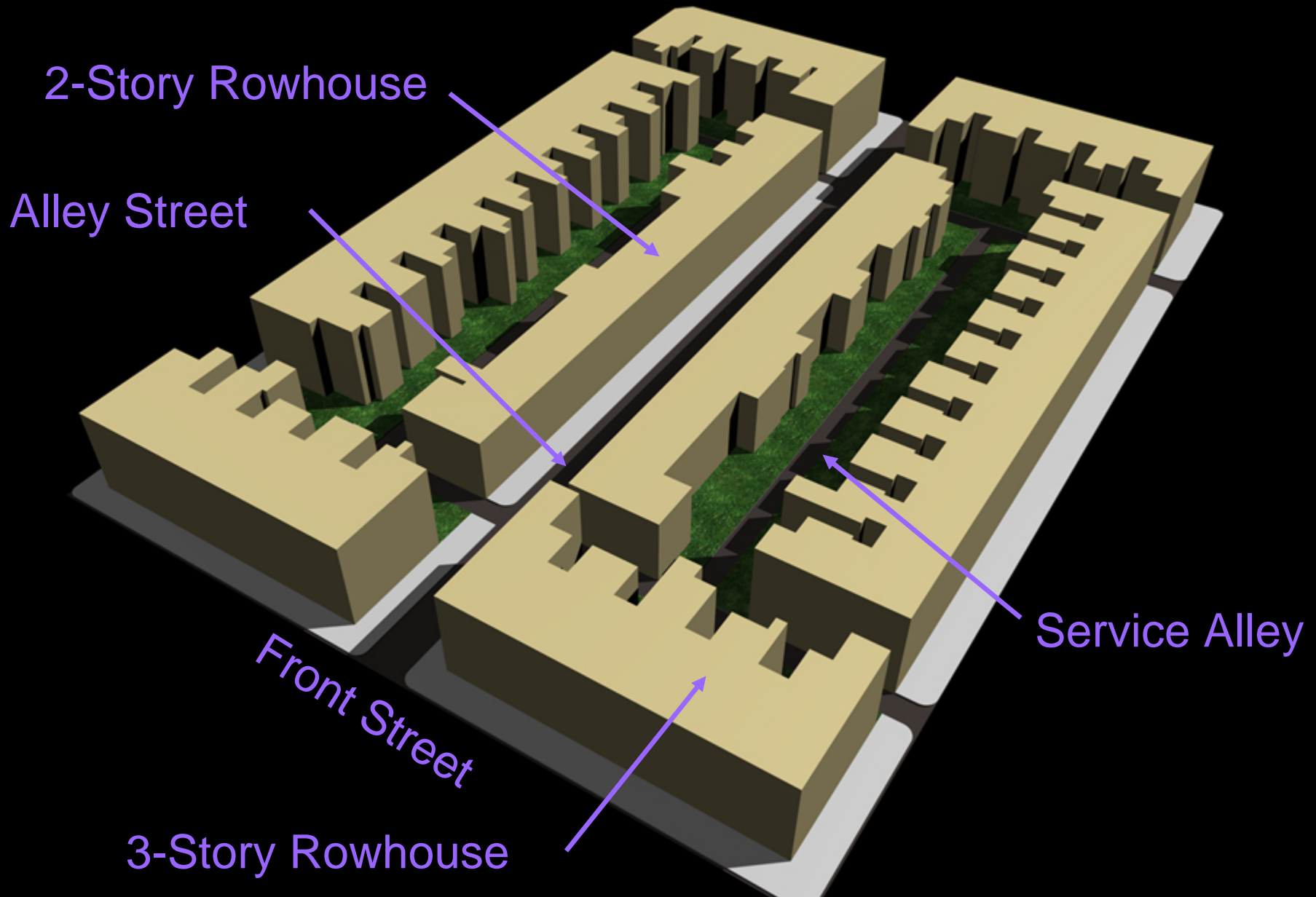
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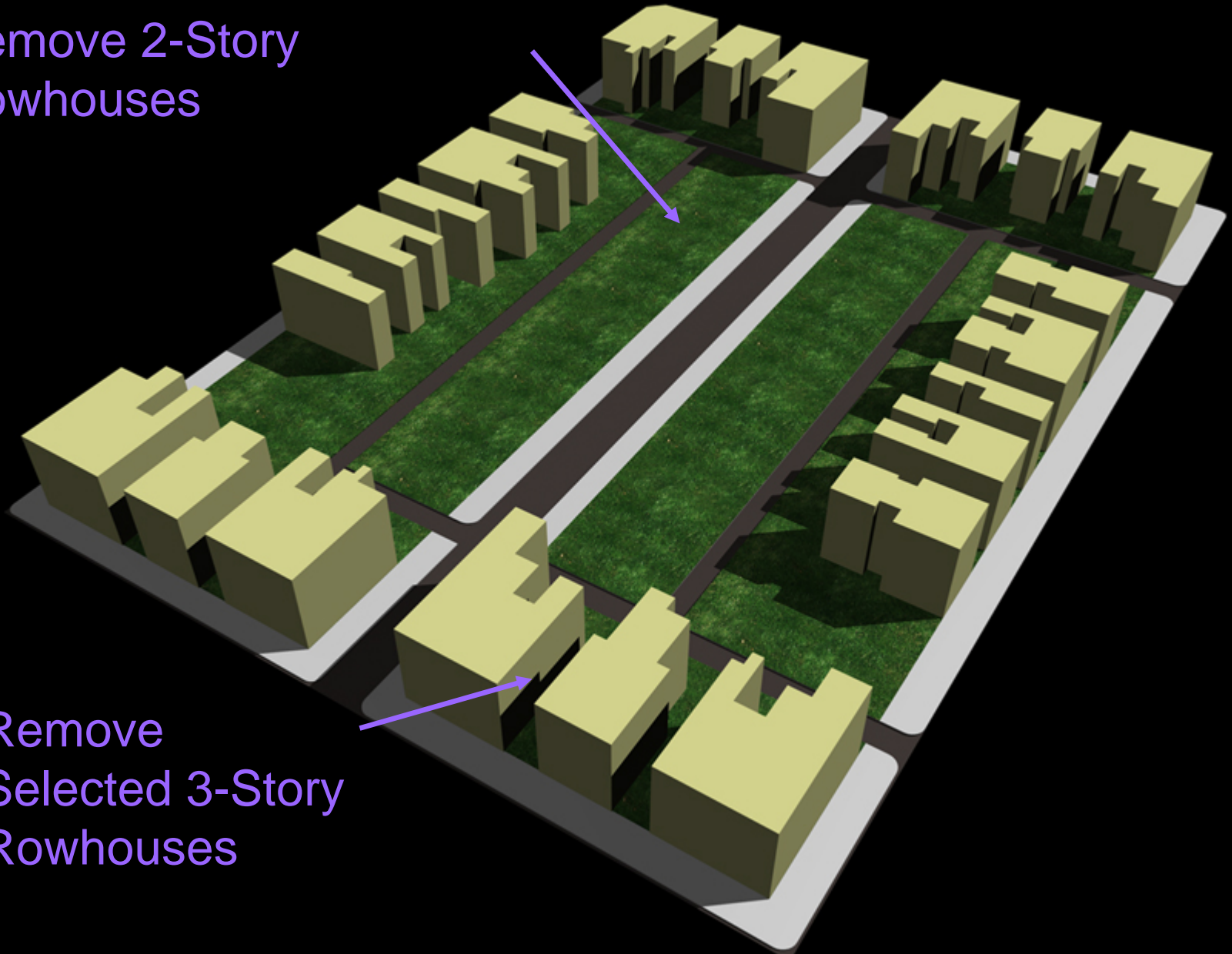
Design Strategy: “Hybrid” Development Pattern





The Baltimore Rowhouse: **Existing Rowhouse Block**

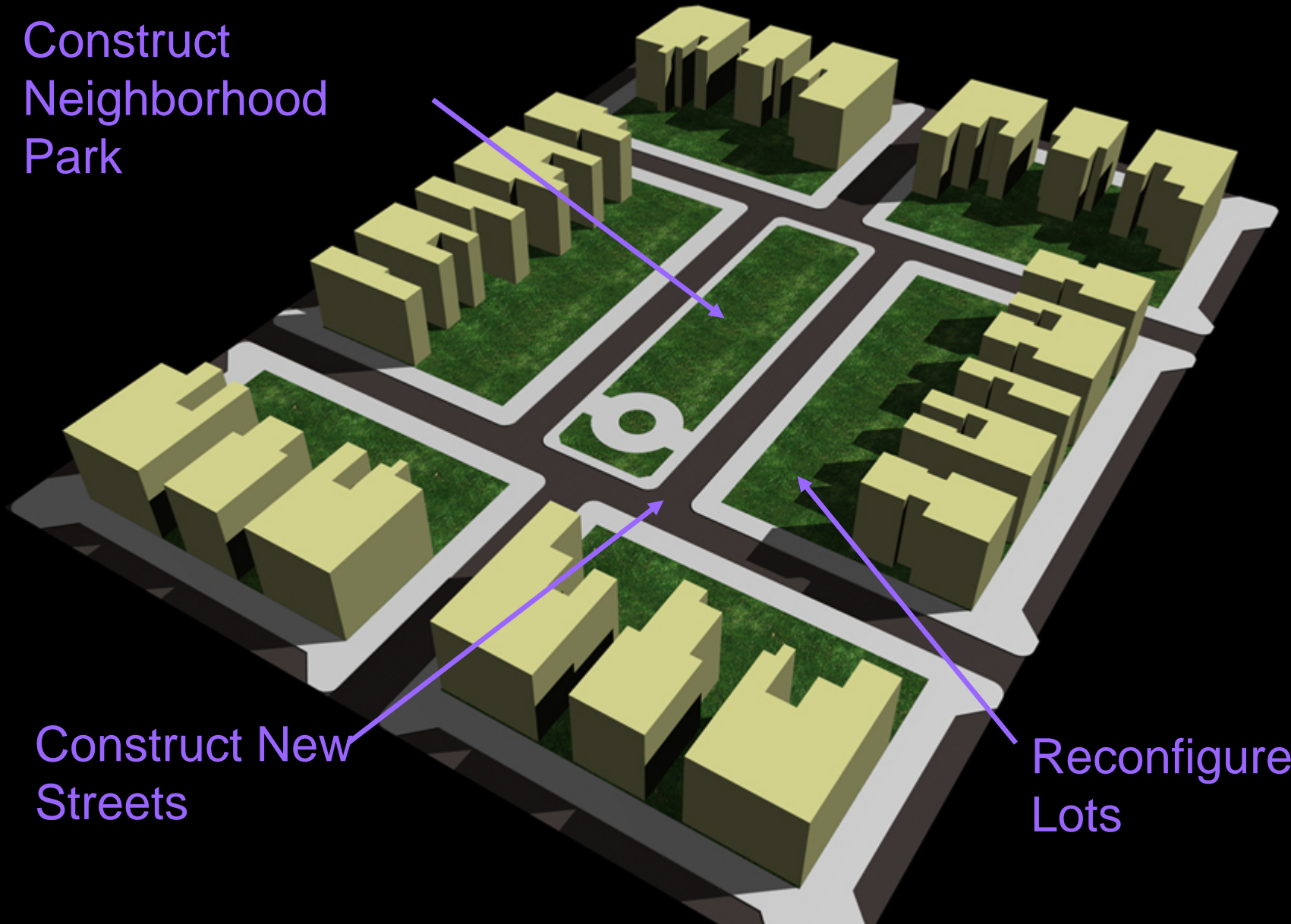
Remove 2-Story  
Rowhouses



Remove  
Selected 3-Story  
Rowhouses

Design Strategy: **Block Transformation: Step 1**

Construct  
Neighborhood  
Park



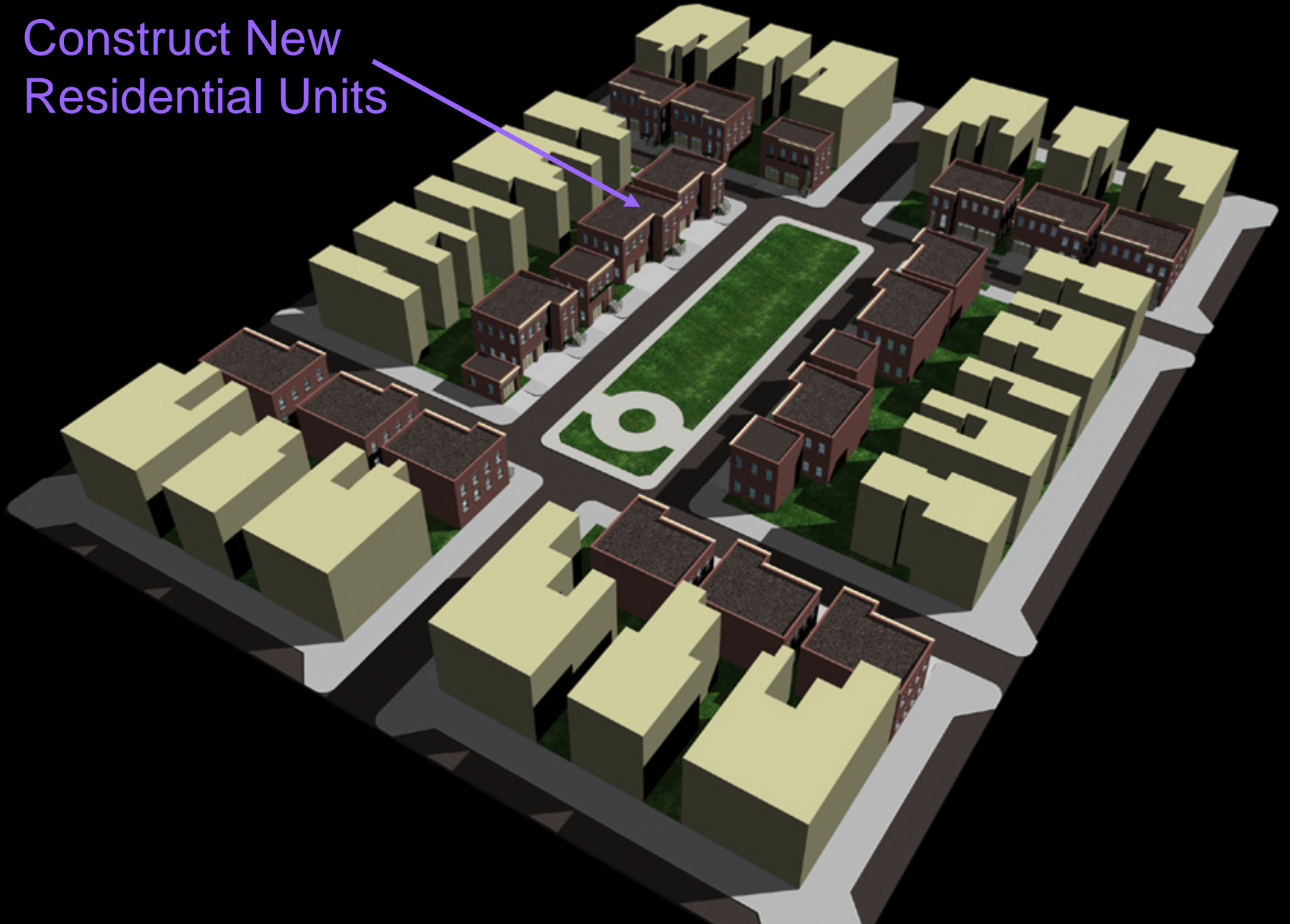
Construct New  
Streets

Reconfigure  
Lots

Design Strategy: **Block Transformation: Step 2**



Construct New  
Residential Units



Design Strategy: **Block Transformation: Step 3**

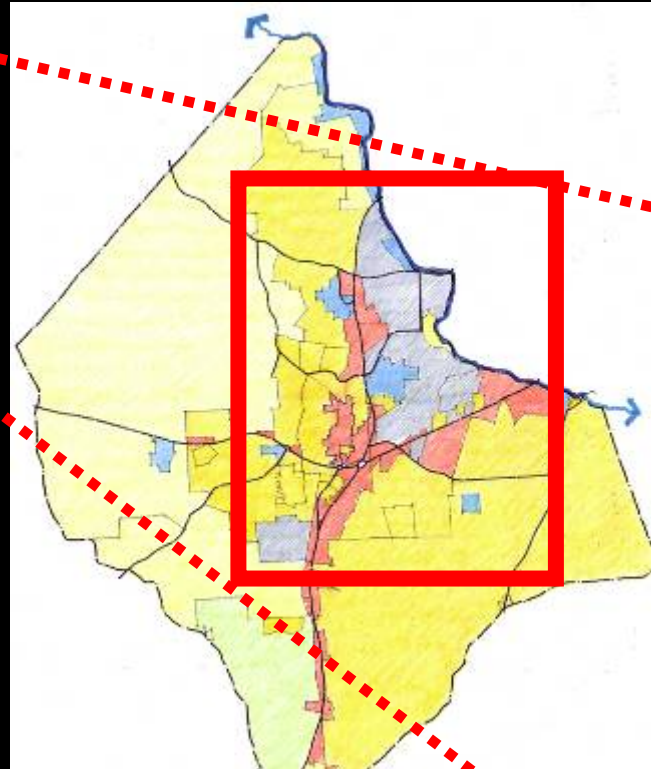
# **Understanding Context:**

## **Land Use Patterns**

# Land Use Patterns at Different Scales

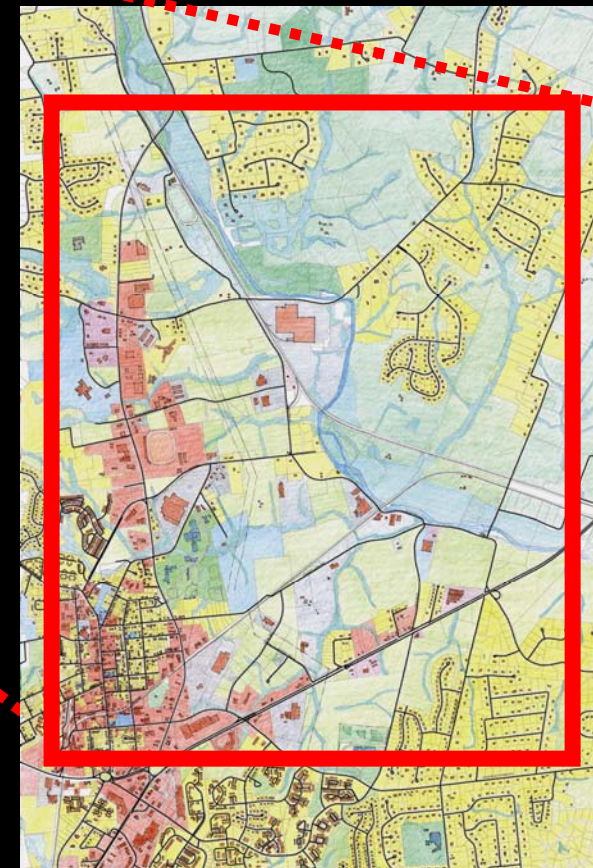


**Regional**



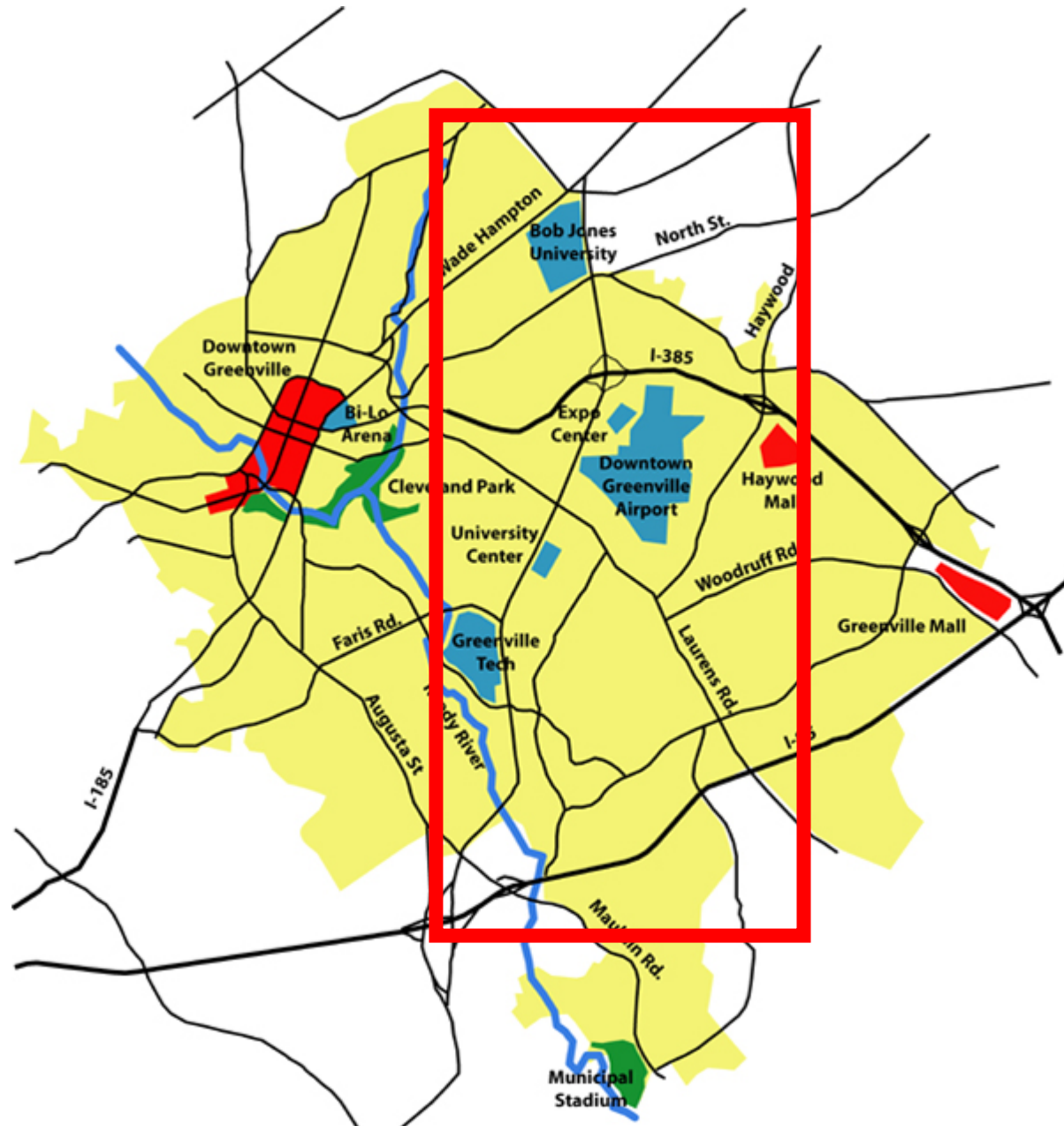
**Local**

**Study Area**

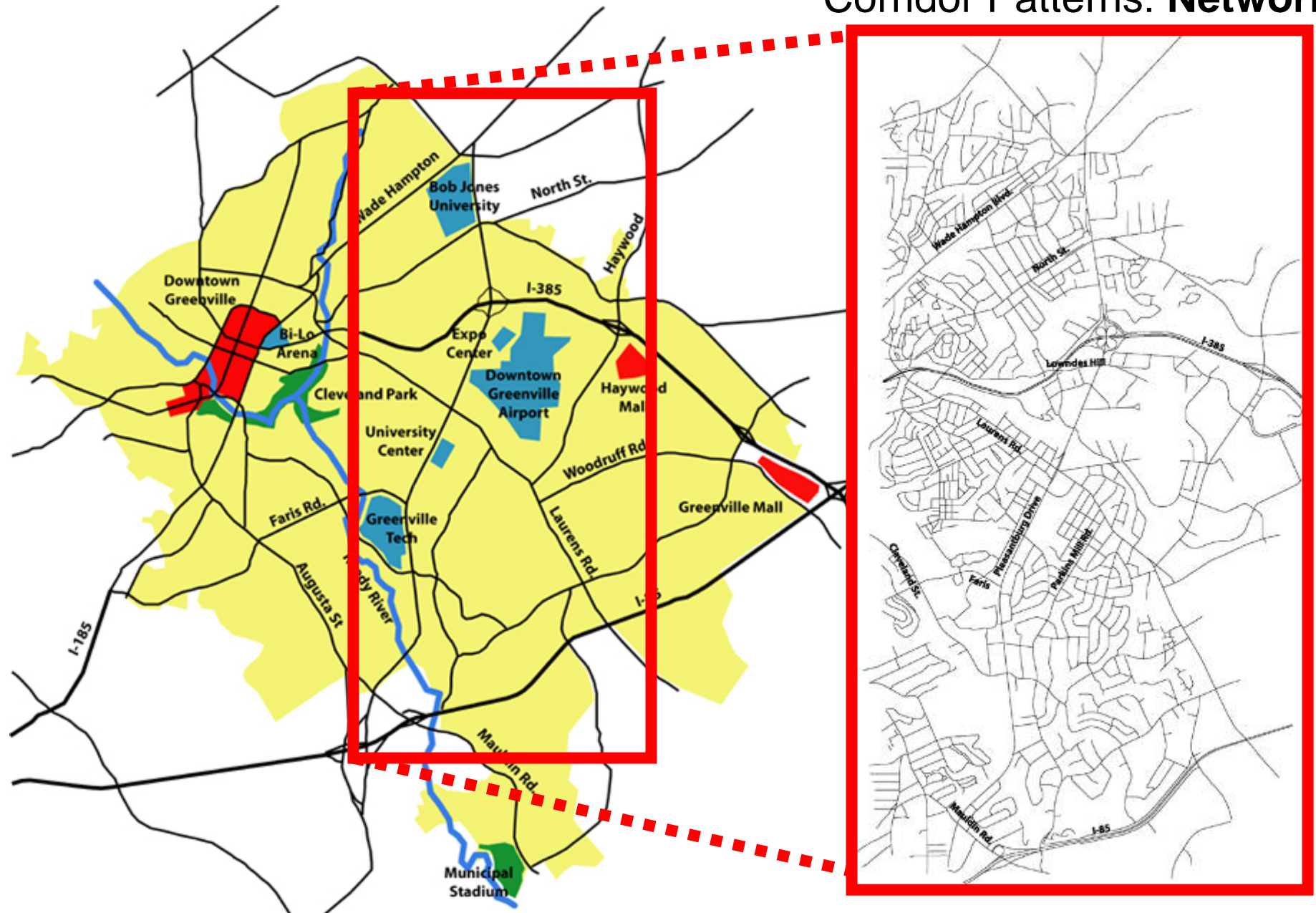




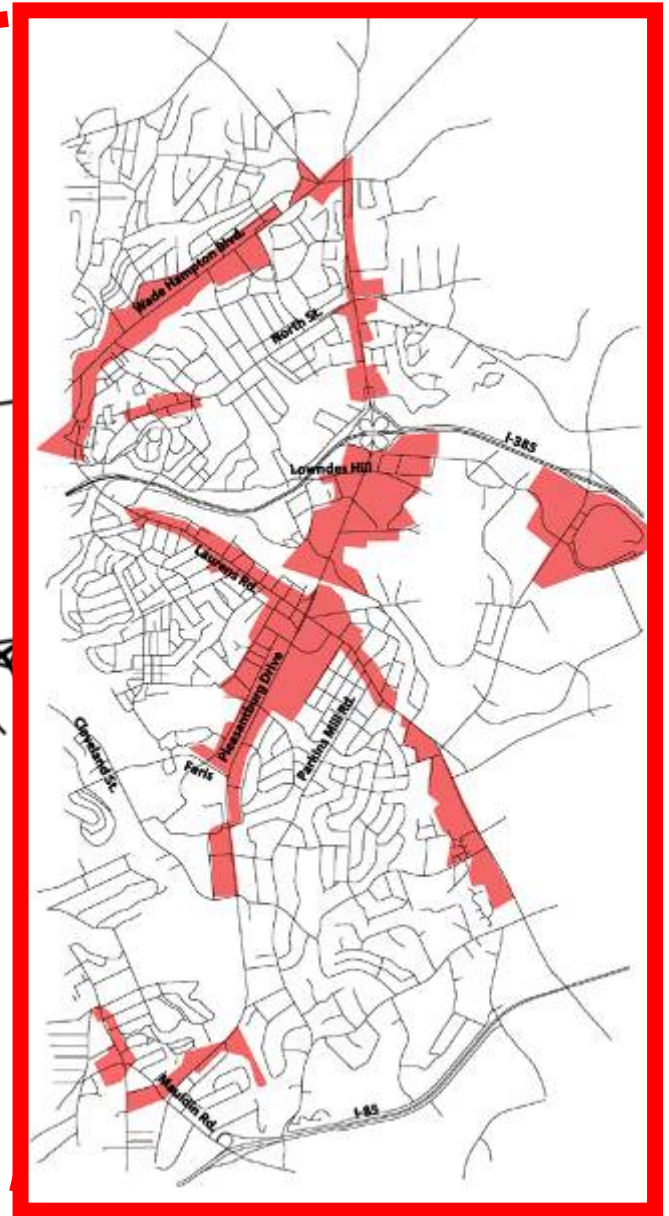
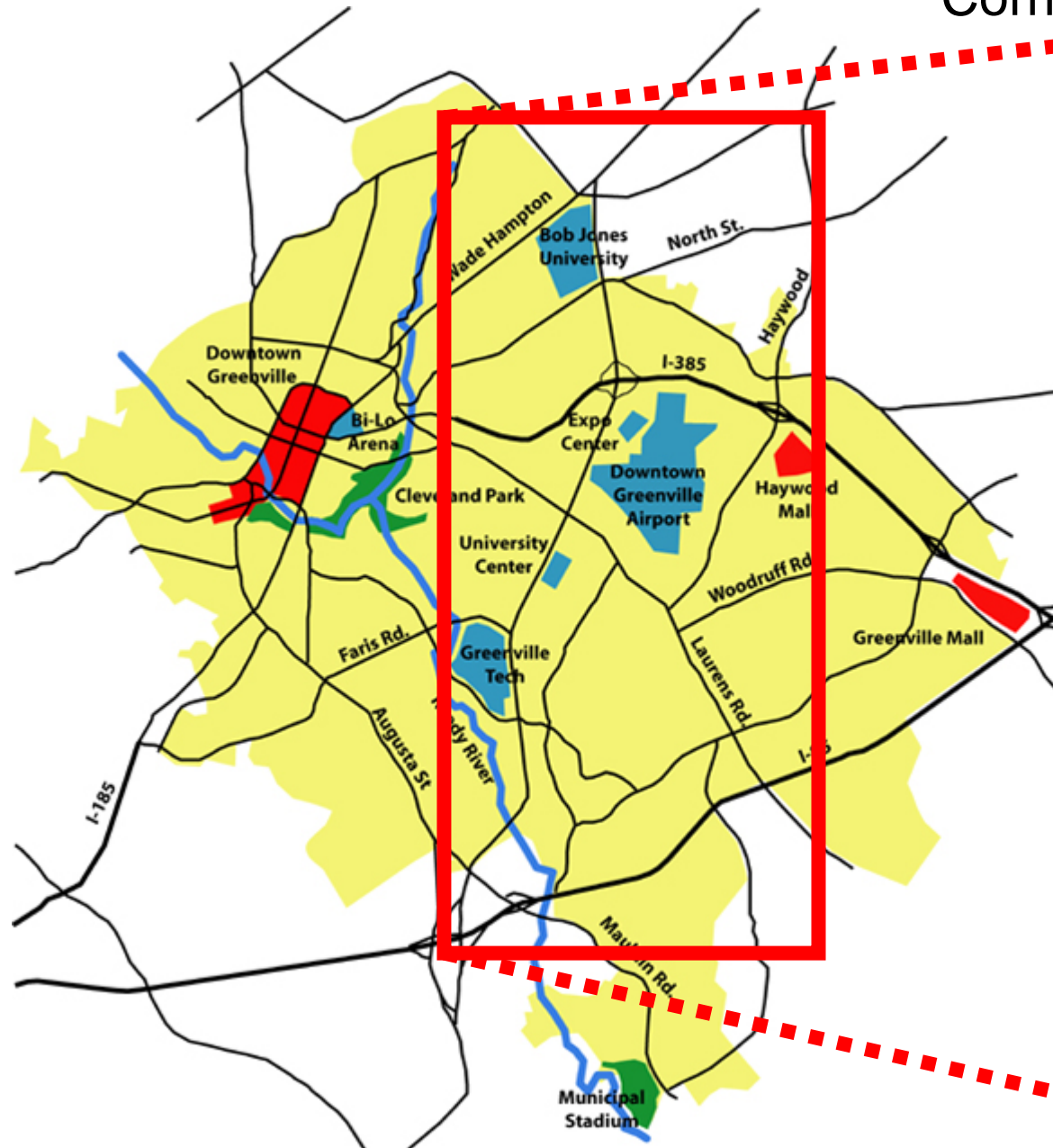
# Regional Patterns



## Corridor Patterns: **Network**

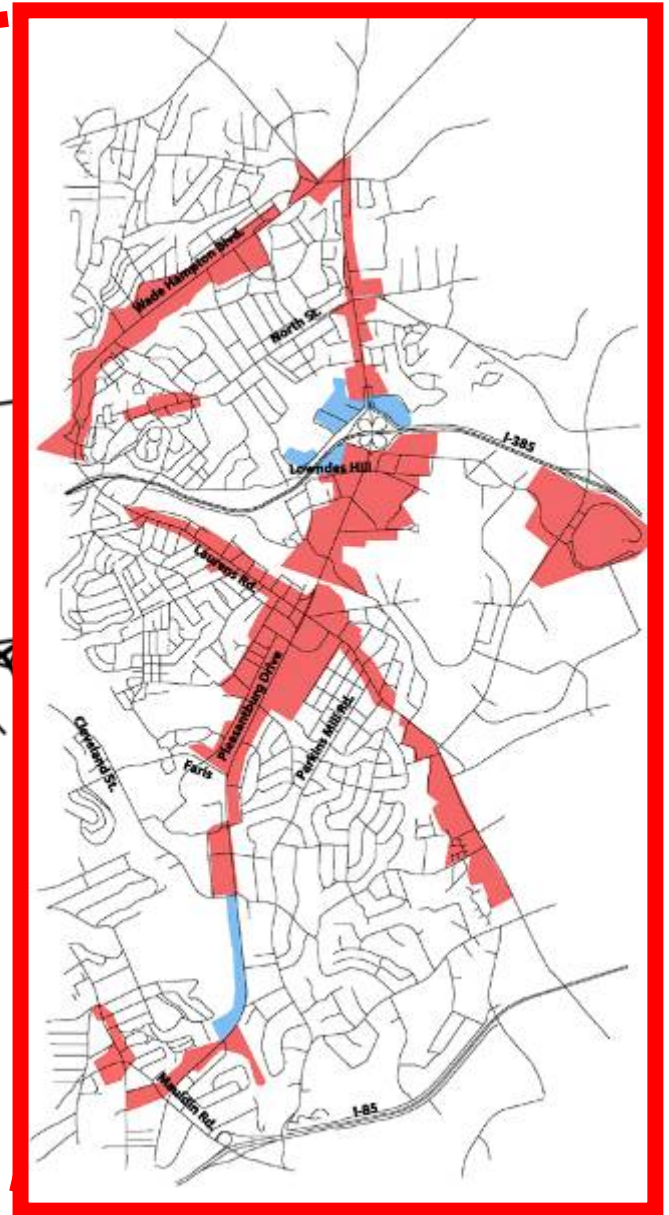
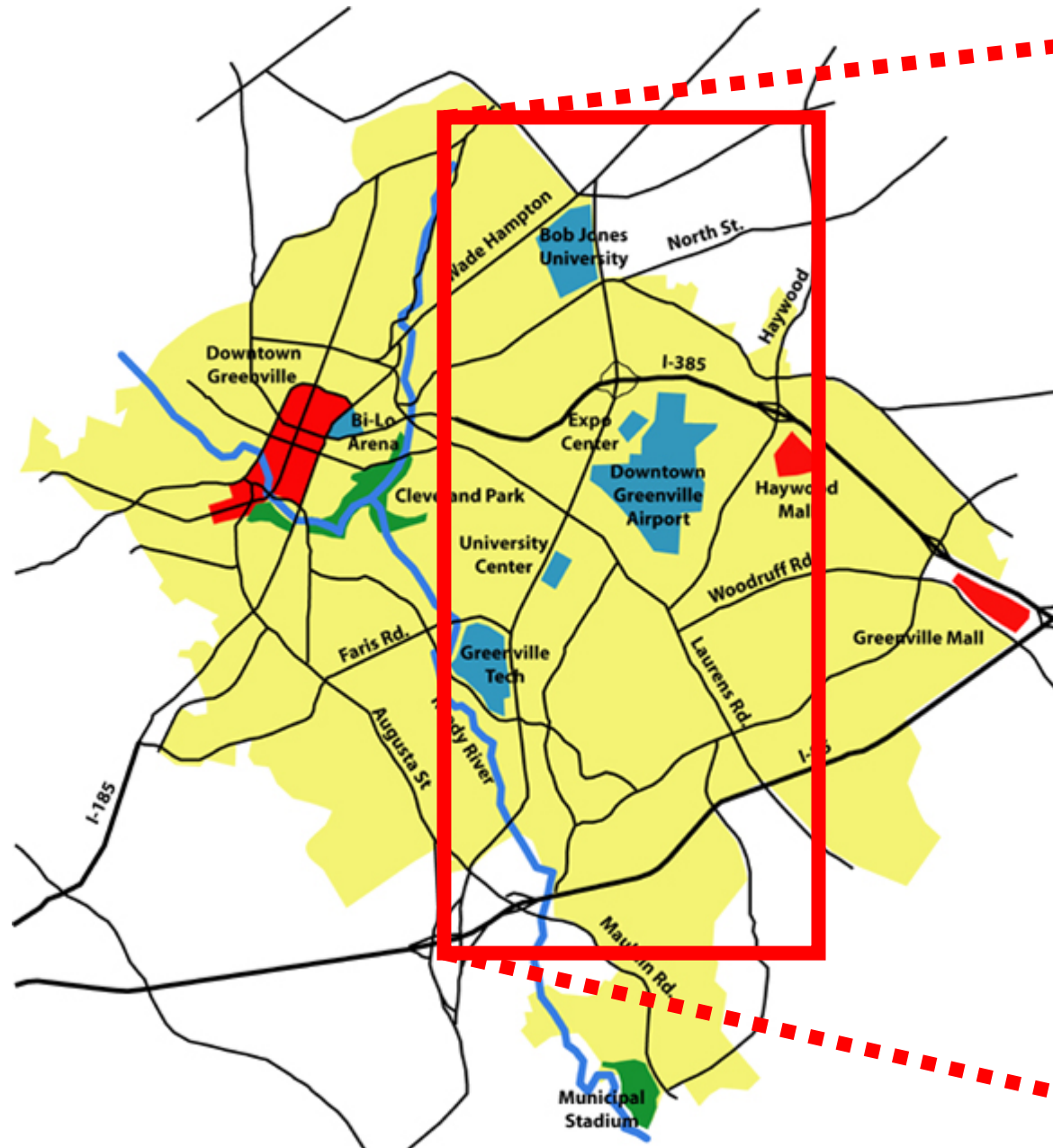


## Corridor Patterns: **Commercial**

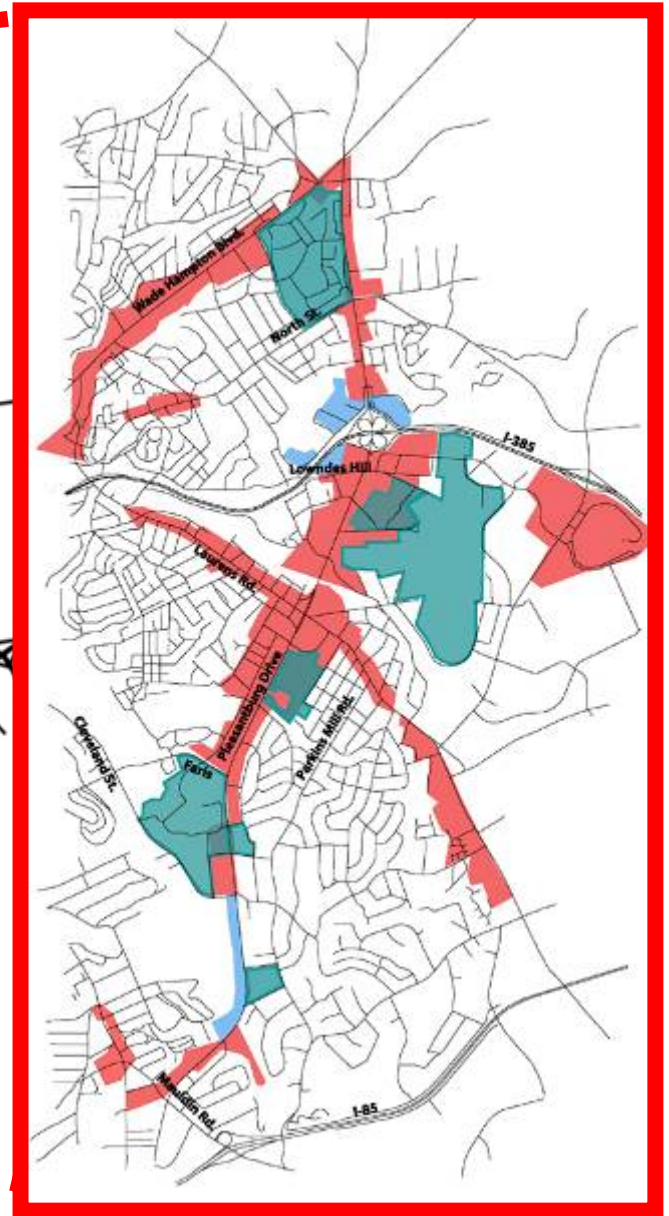
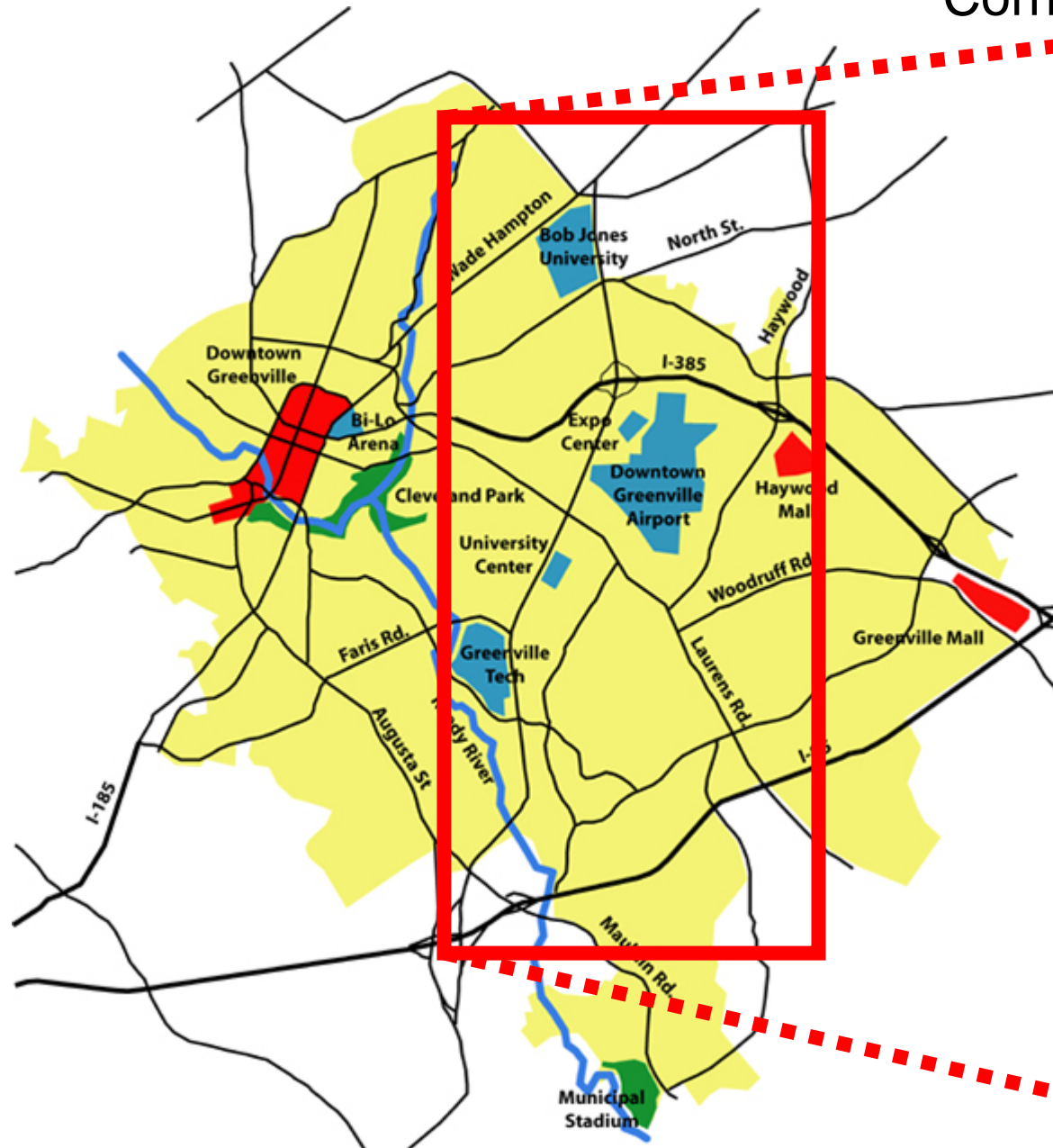




## Corridor Patterns: Office

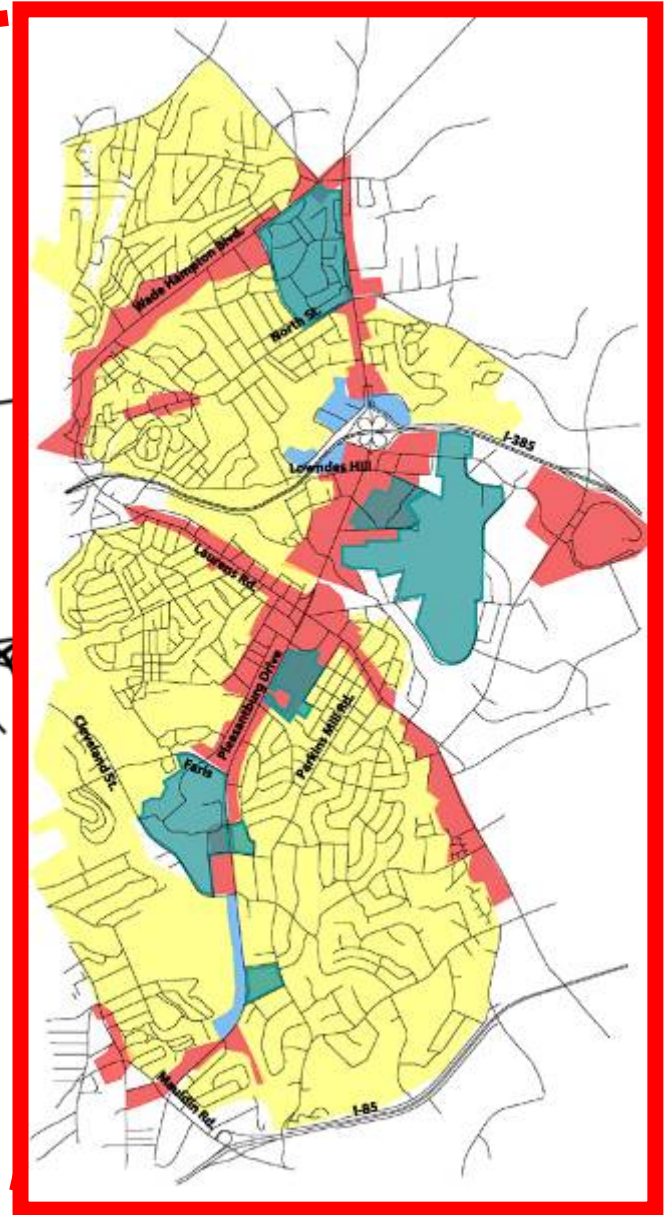
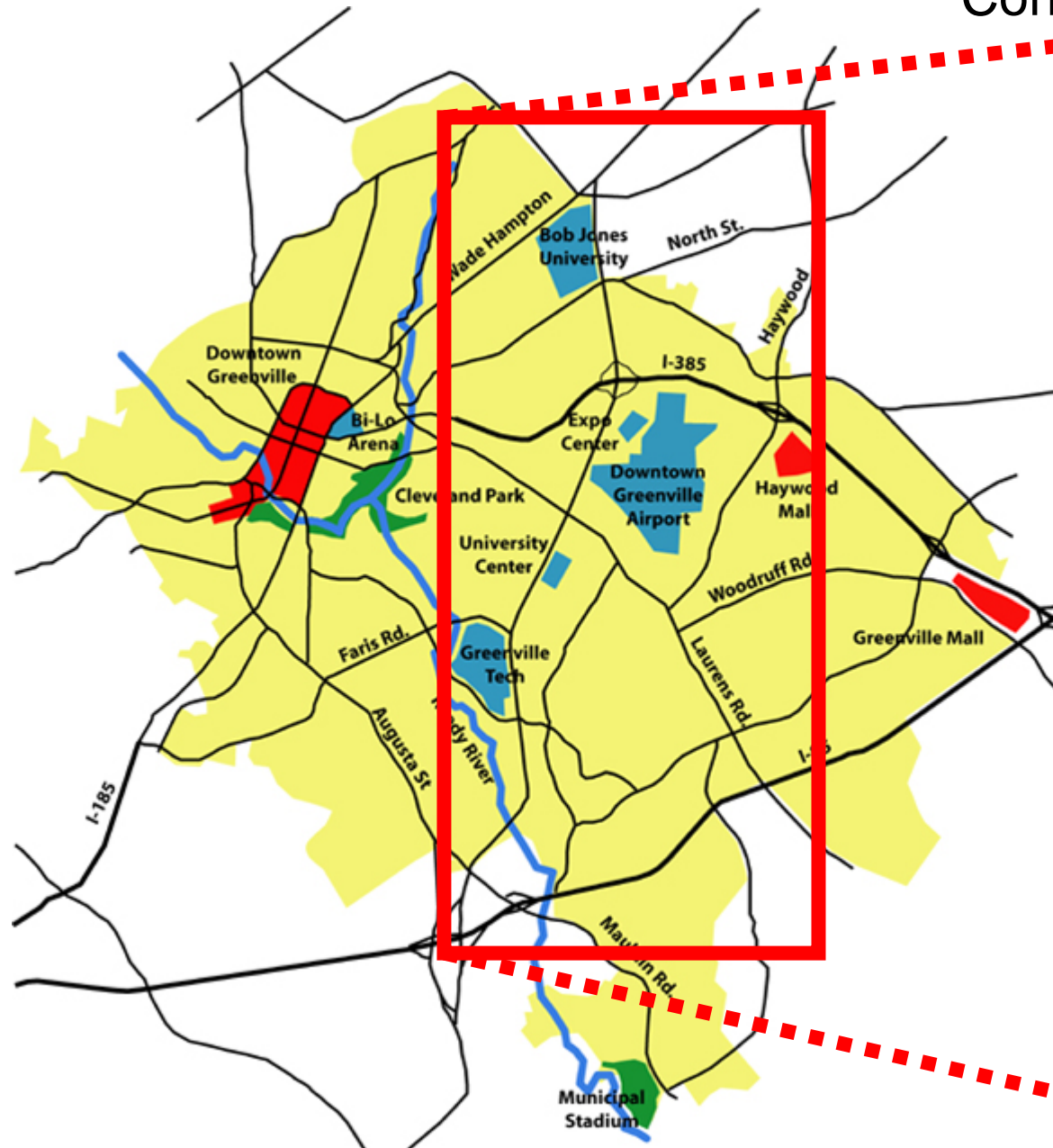


## Corridor Patterns: **Institutional**



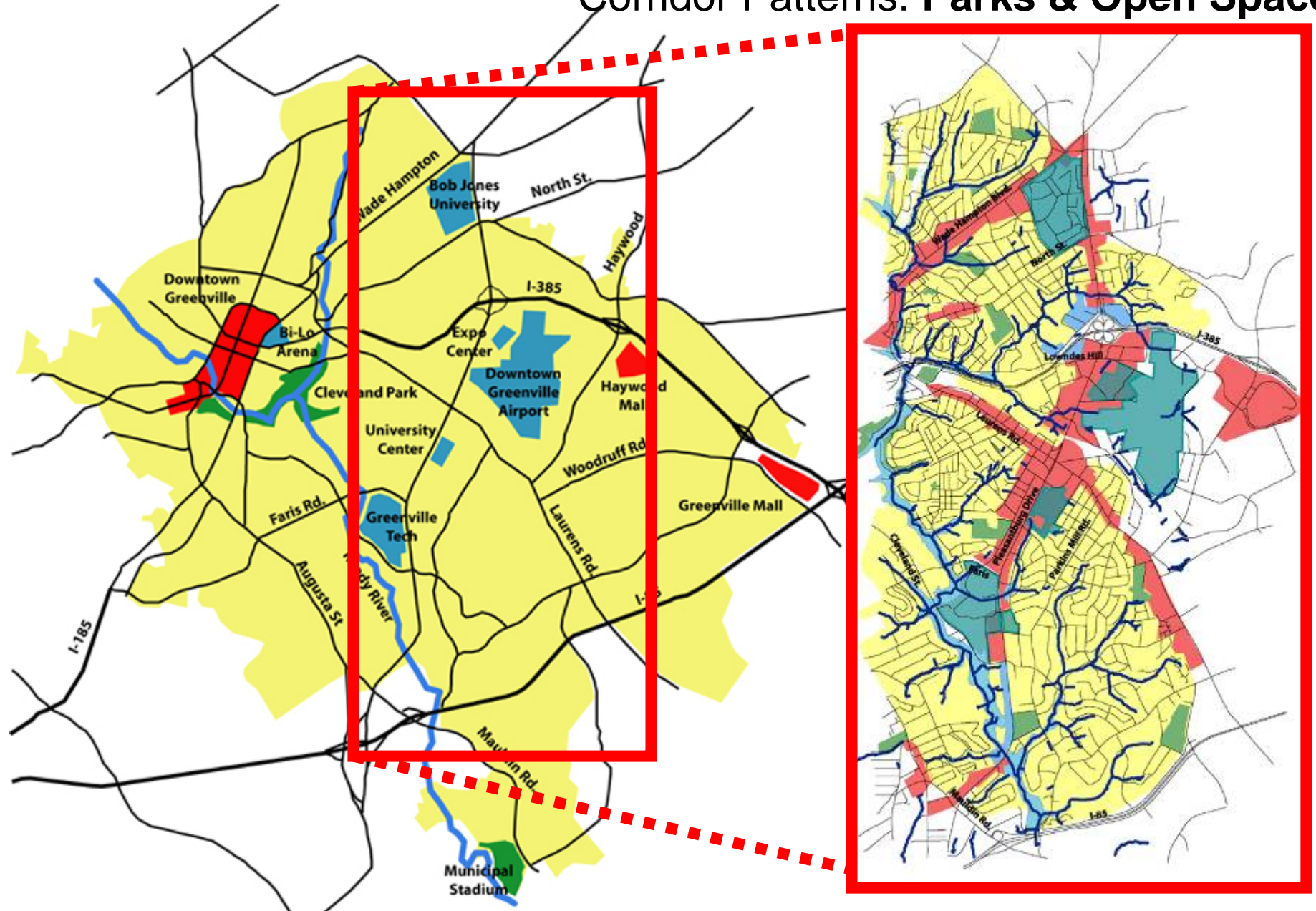


## Corridor Patterns: **Residential**

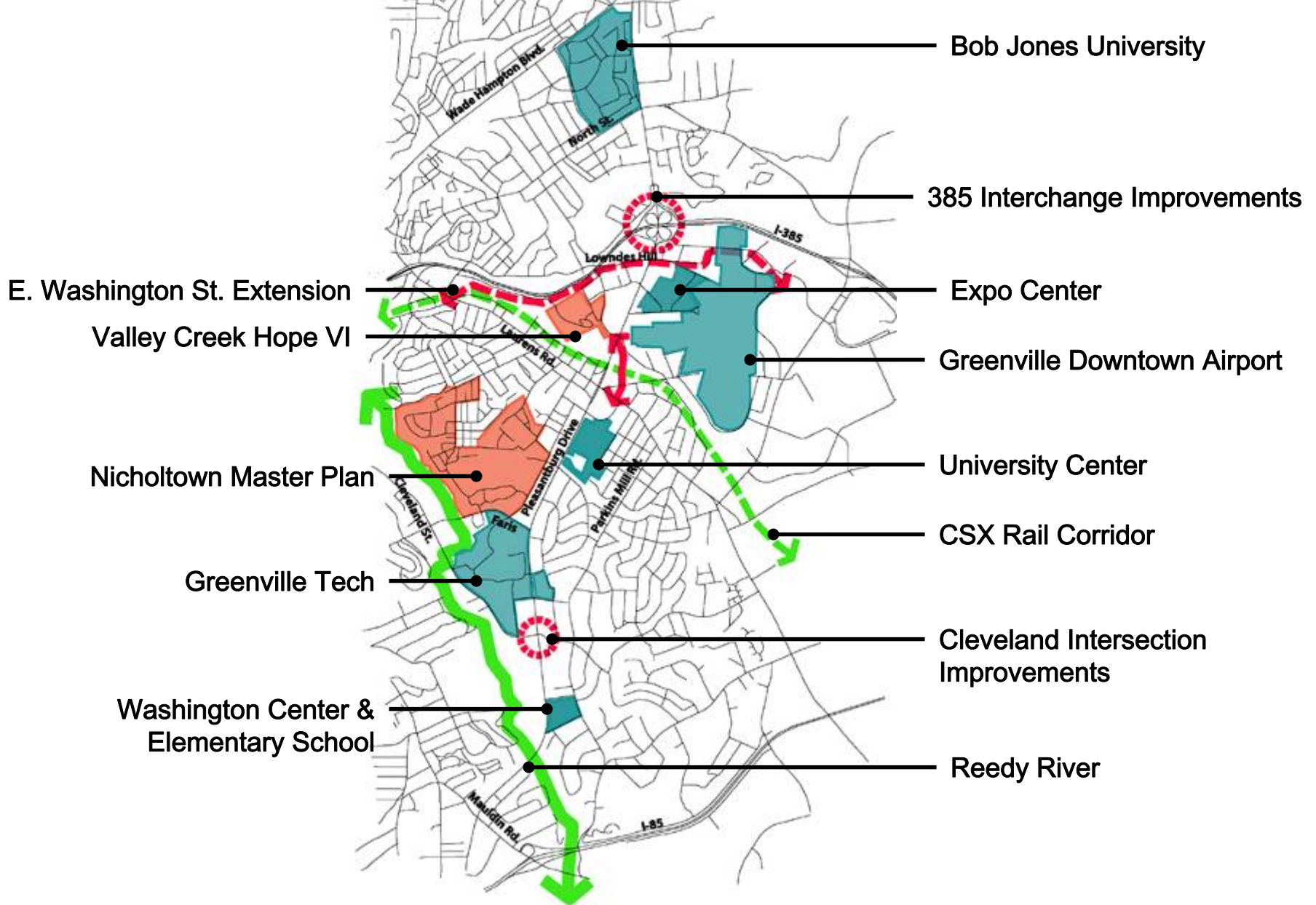




# Corridor Patterns: Parks & Open Space



# Corridor Patterns: Projects & Initiatives

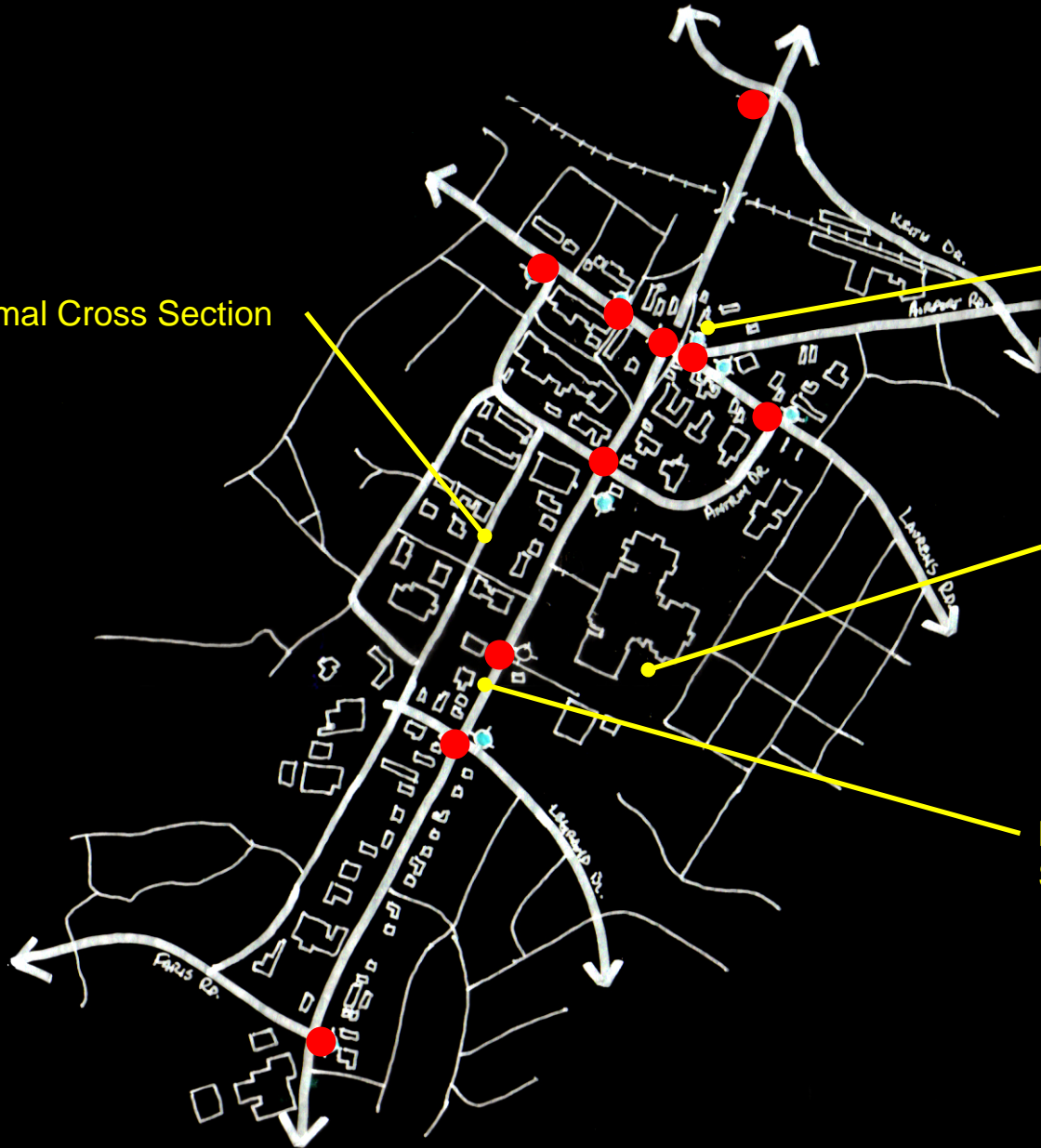


Informal Cross Section

Insufficient Signal Spacing

Lack of Network

High-Speed, Pedestrian-Hostile  
Section with Excess Capacity



**McAlister District**

**Issues and Analysis**



Formalize Parallel Network

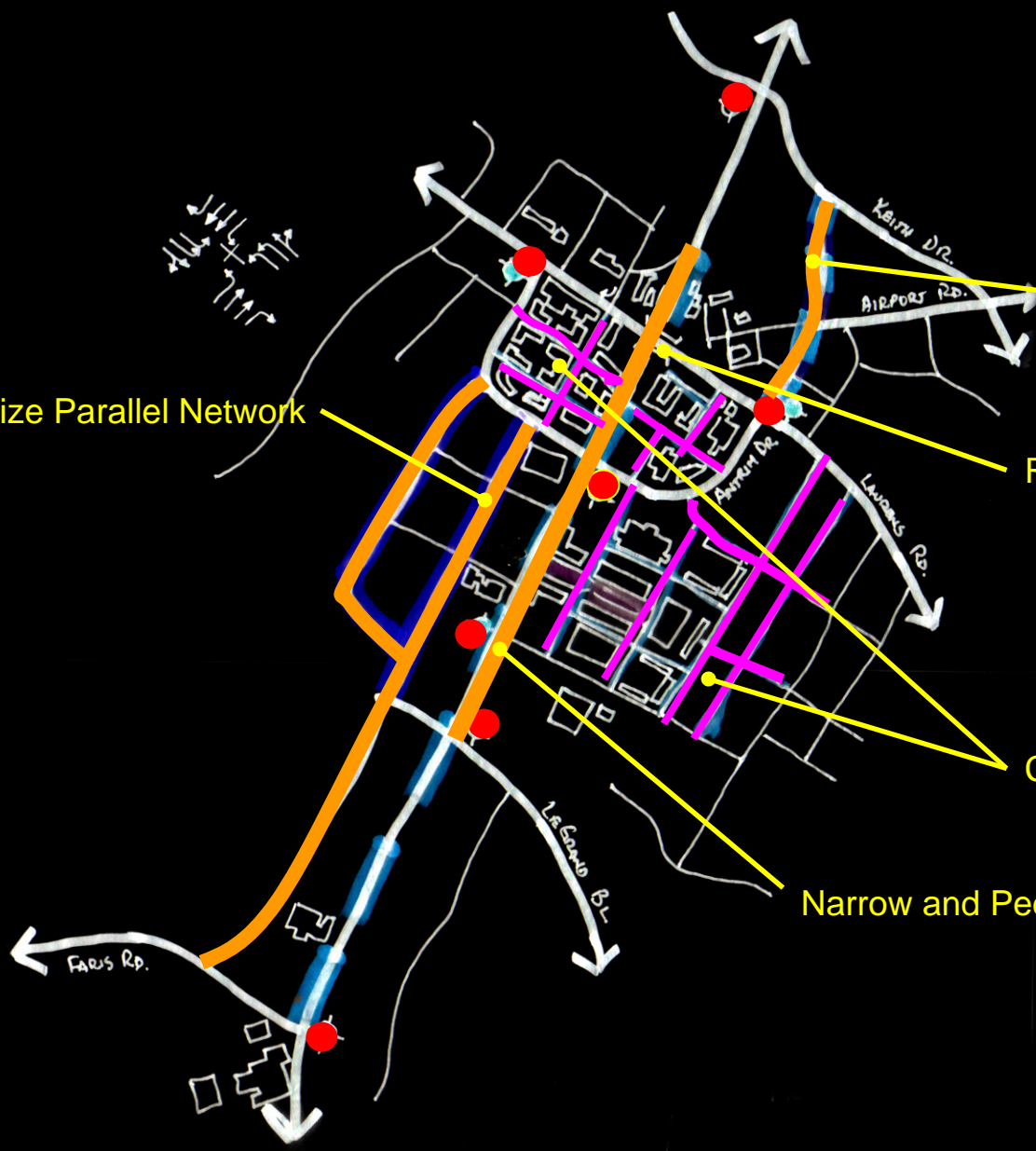
Extend Antrim Drive

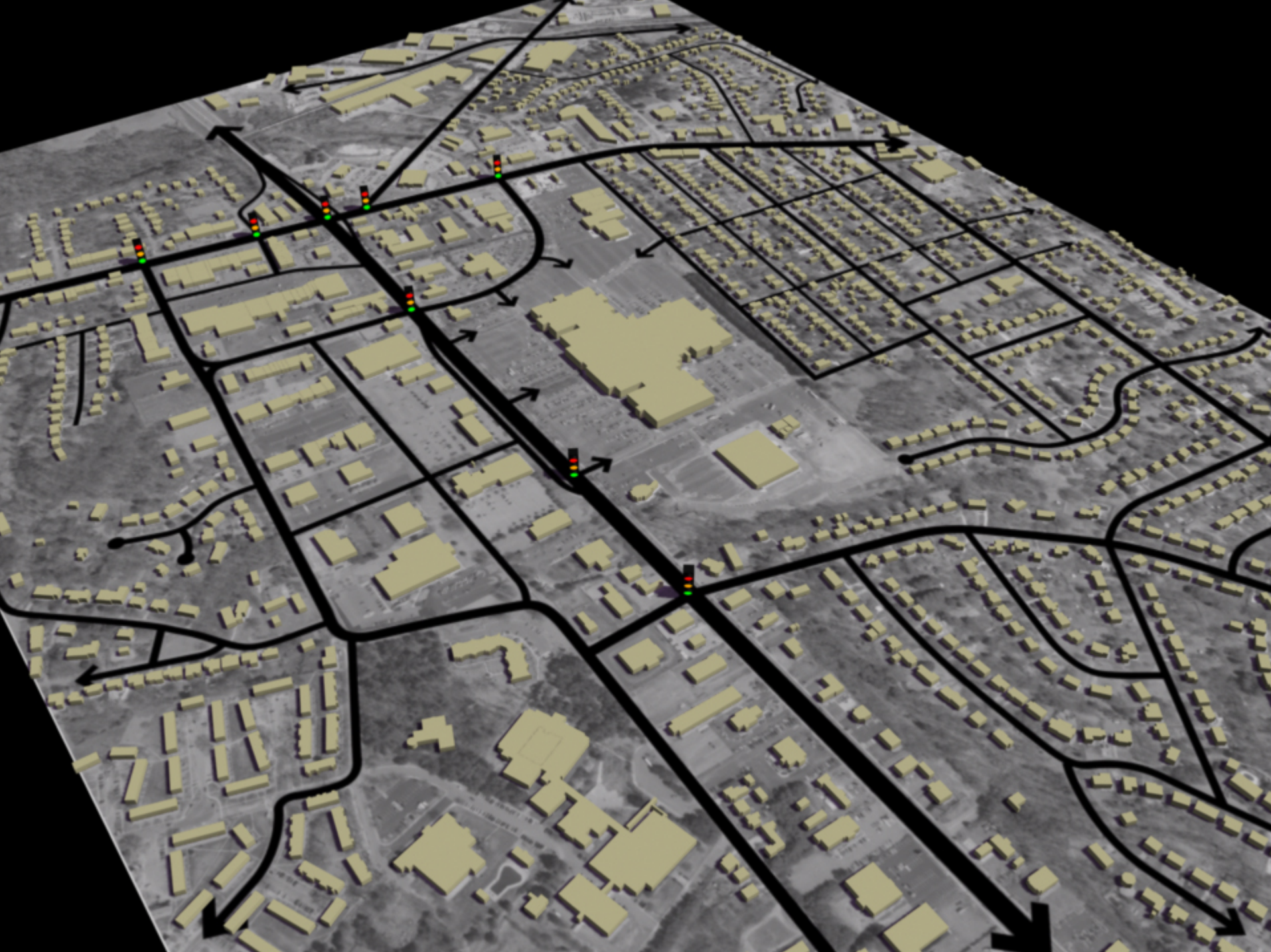
Remove Signals, De-emphasize Ramps

Create New Network

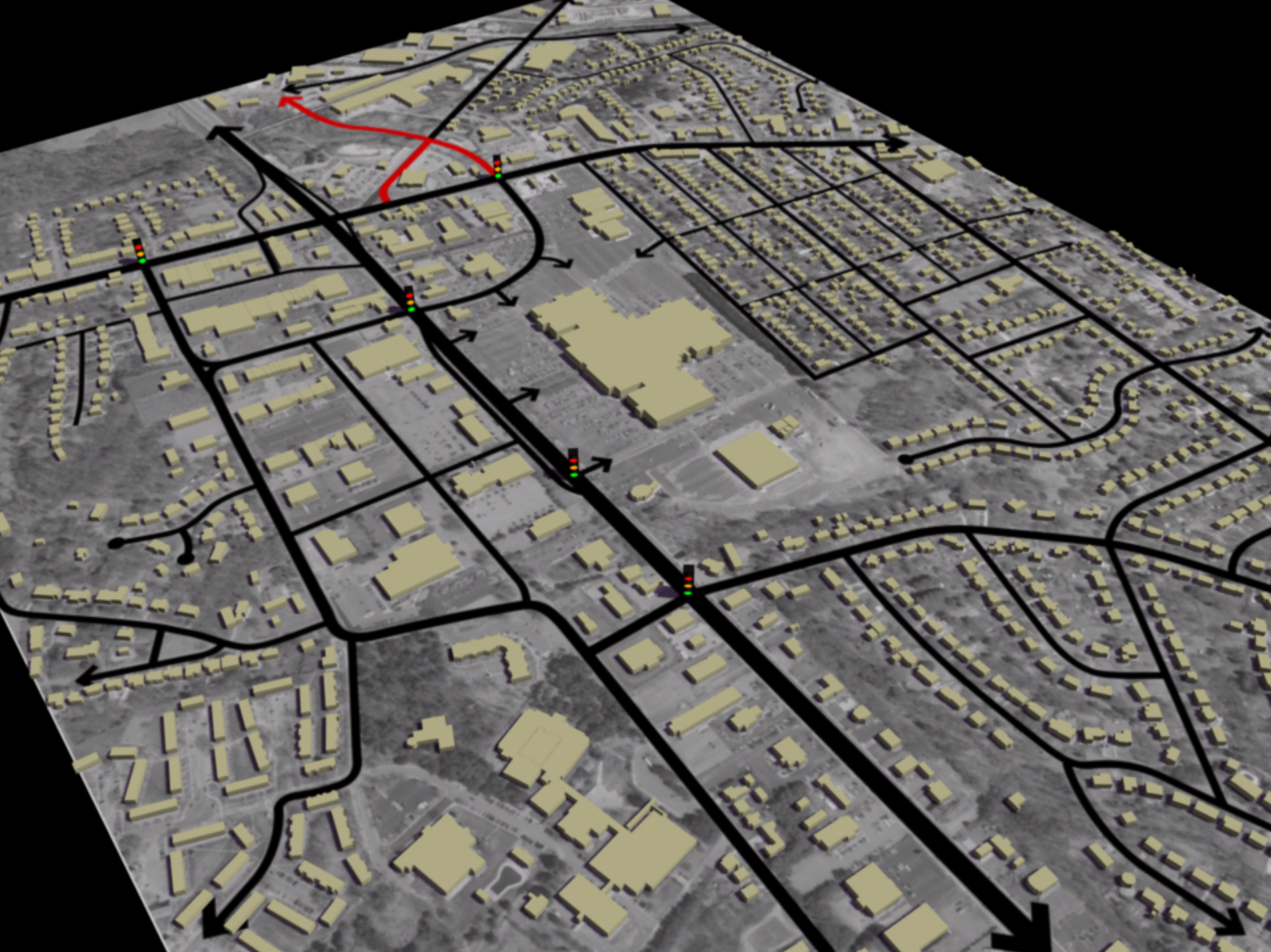
Narrow and Pedestrianize Pleasantburg

# McAlister District Recommendations

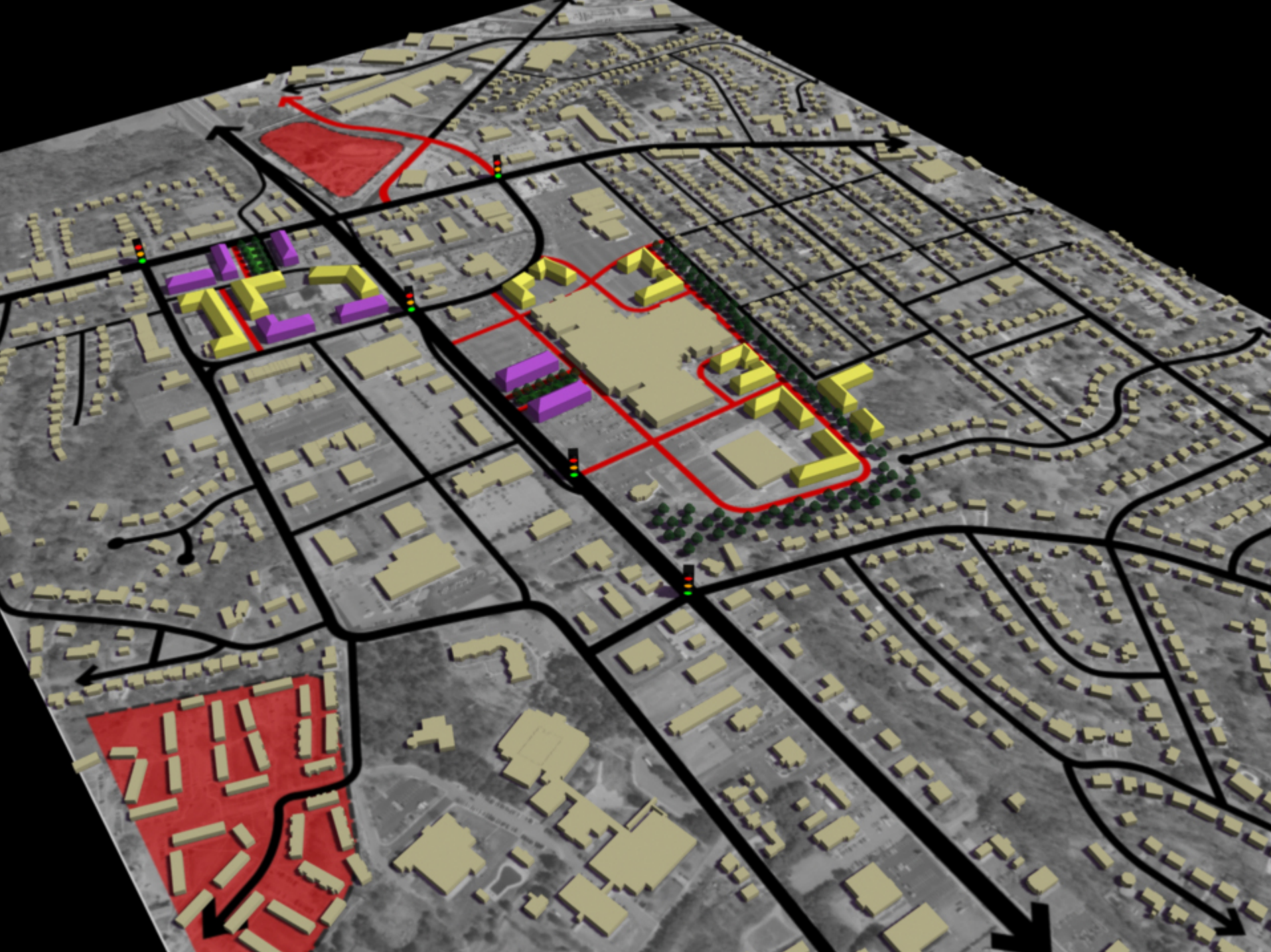




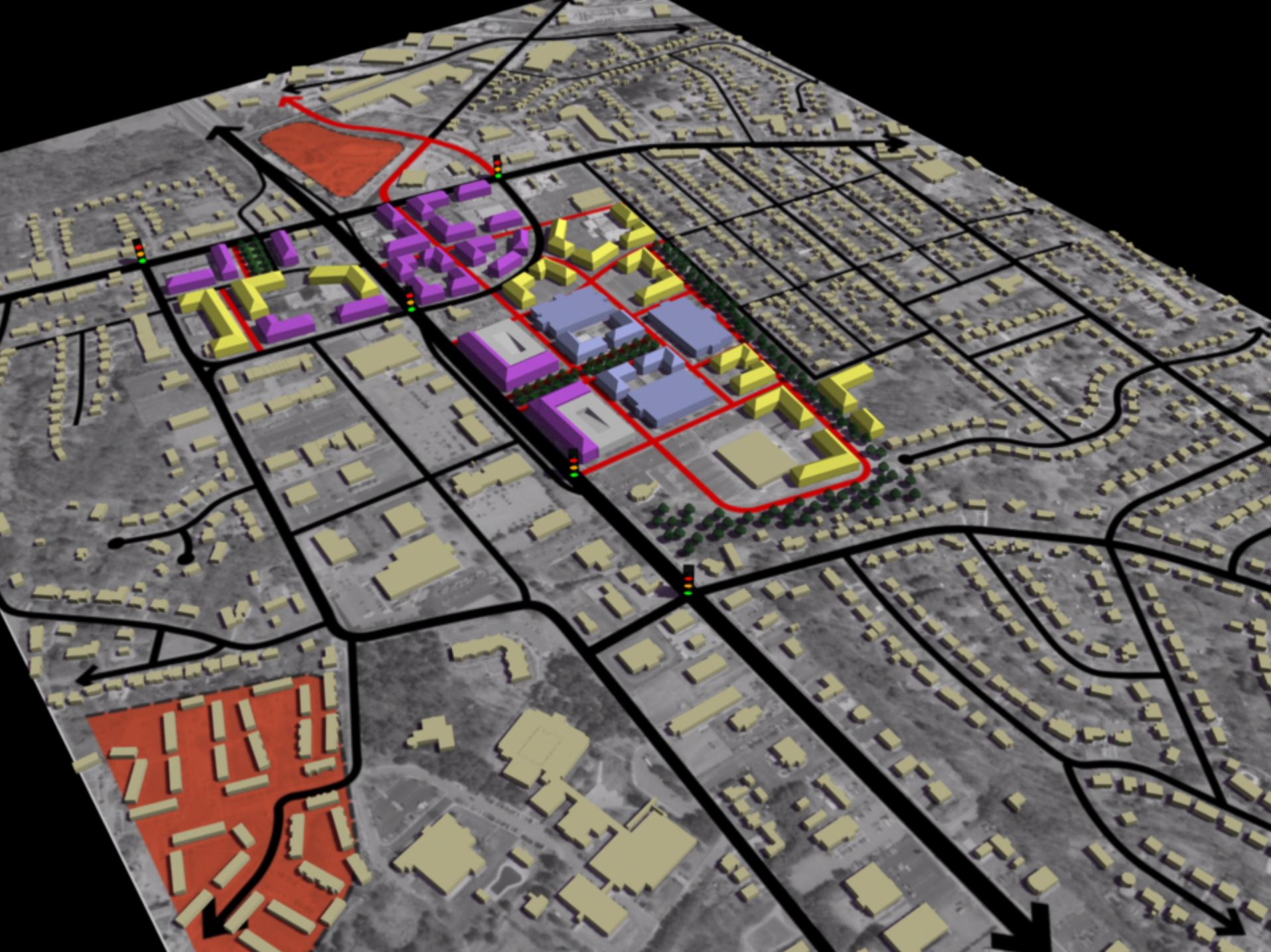




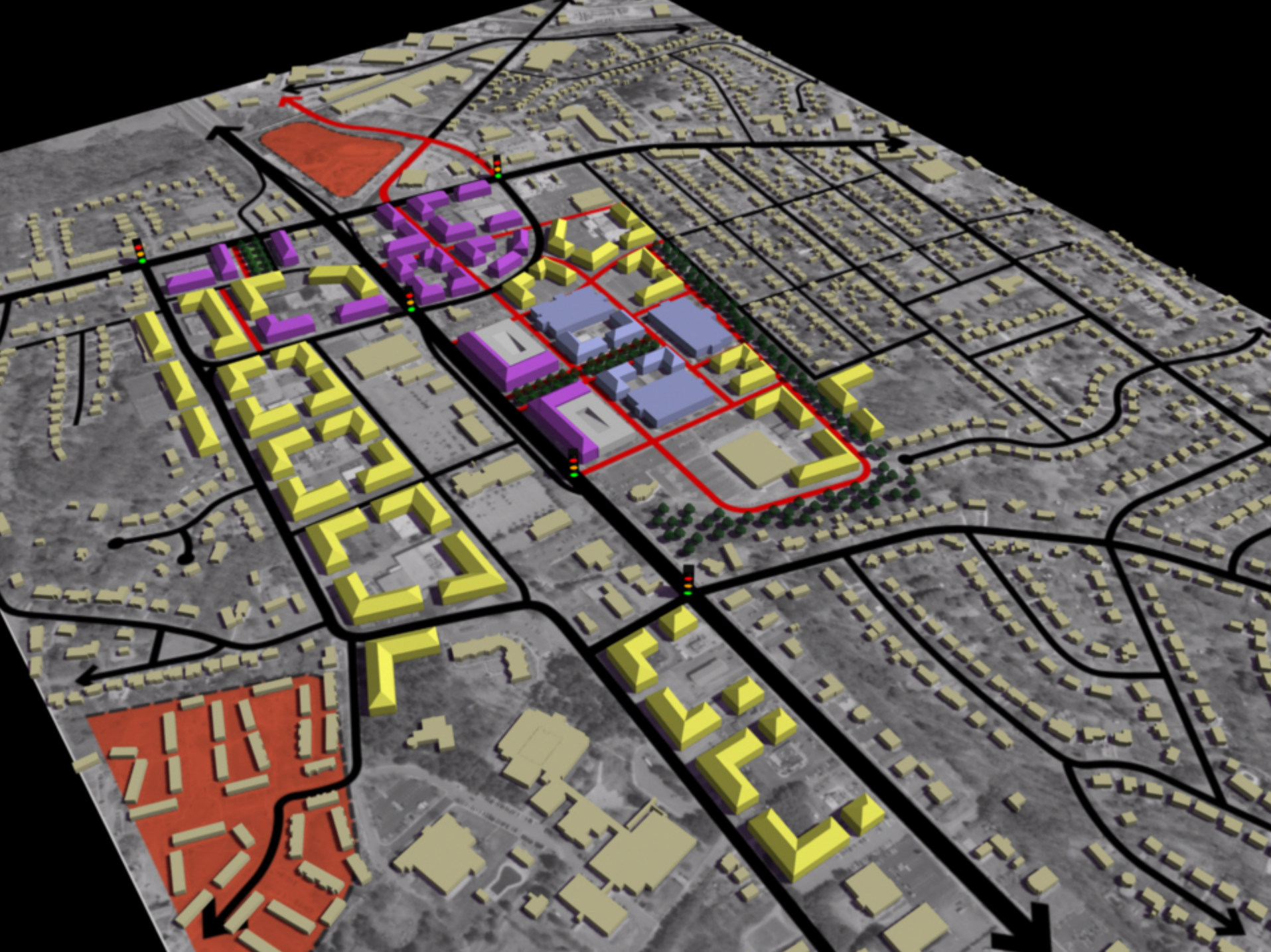






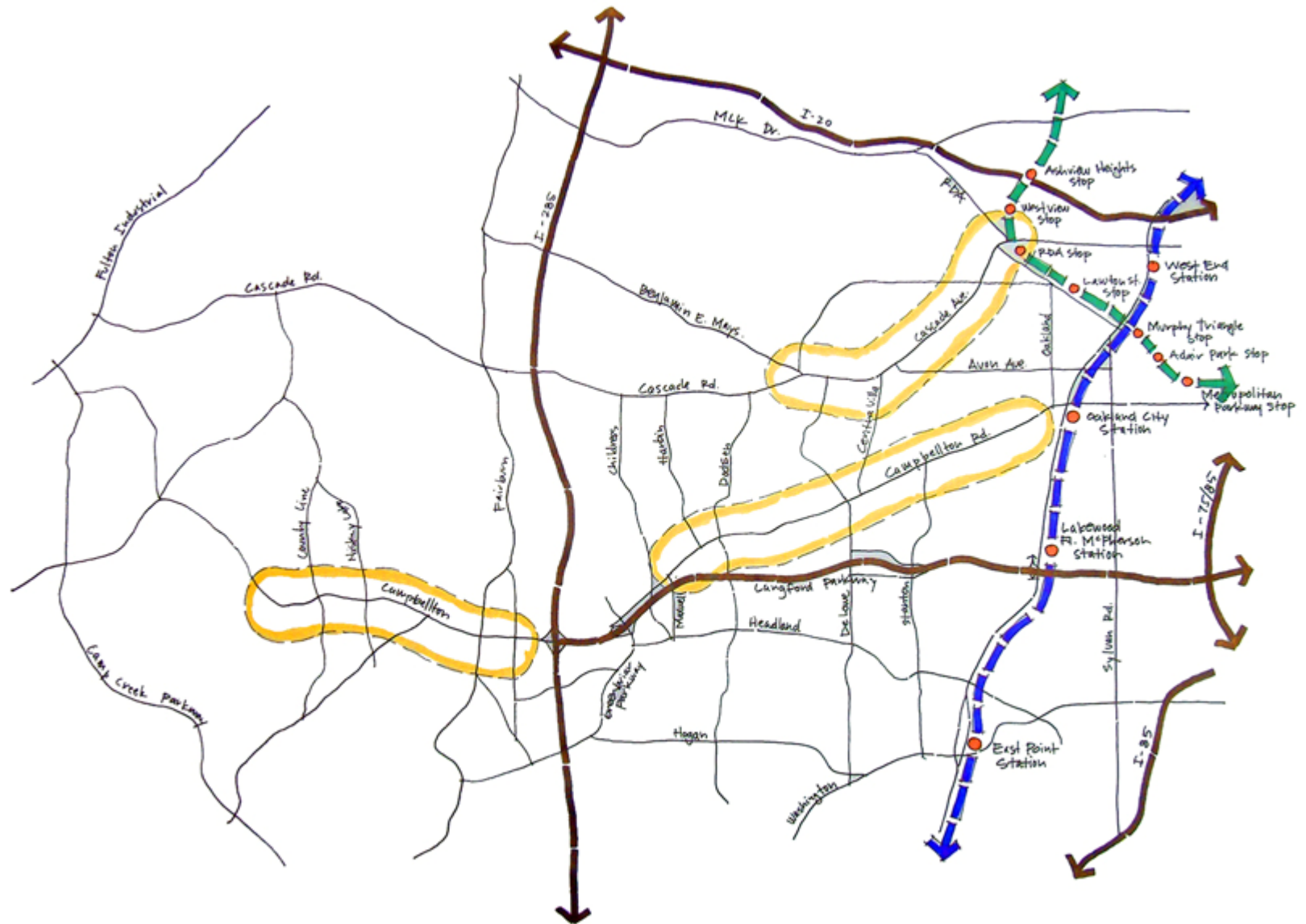




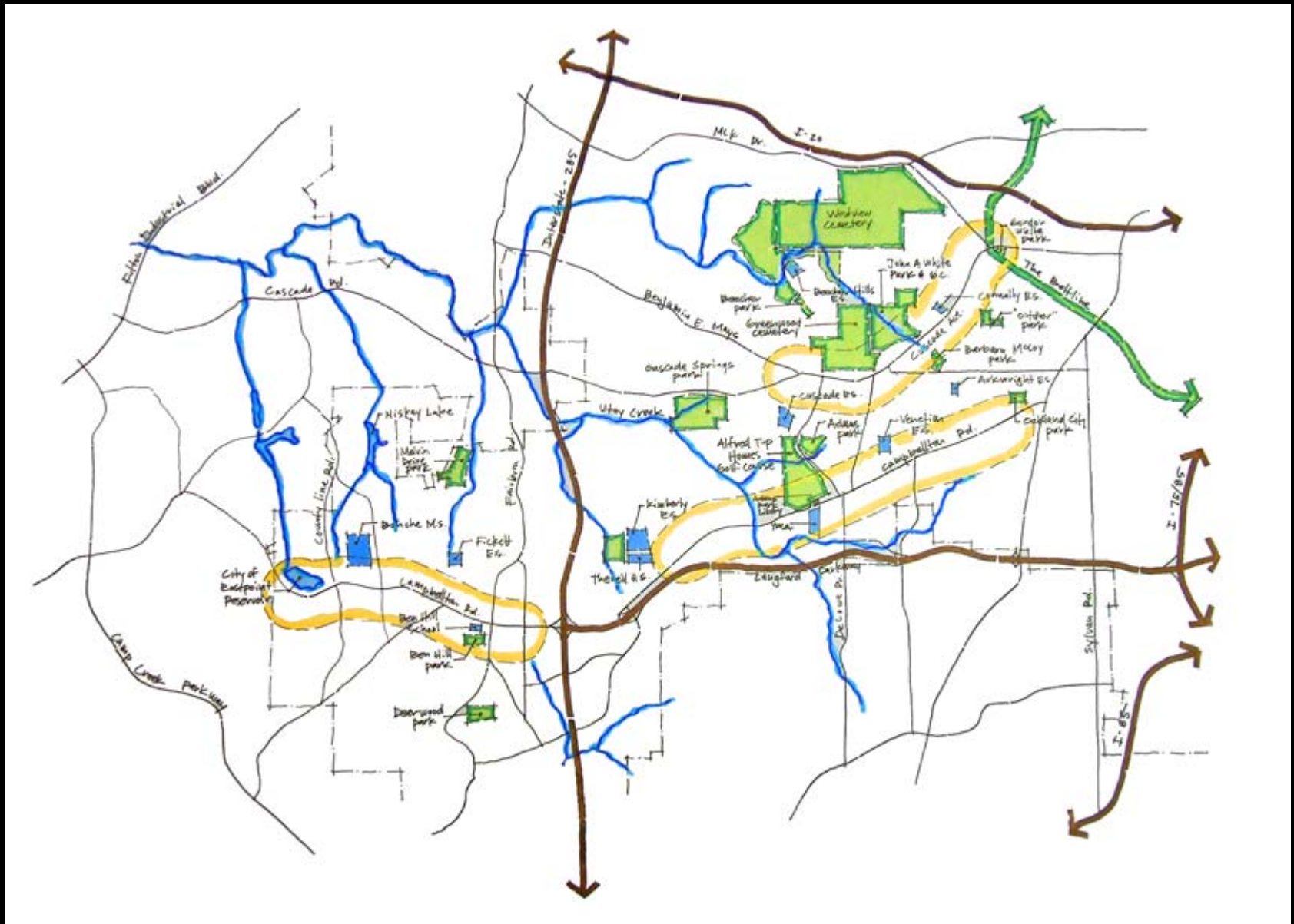




# The Big Picture: Transportation

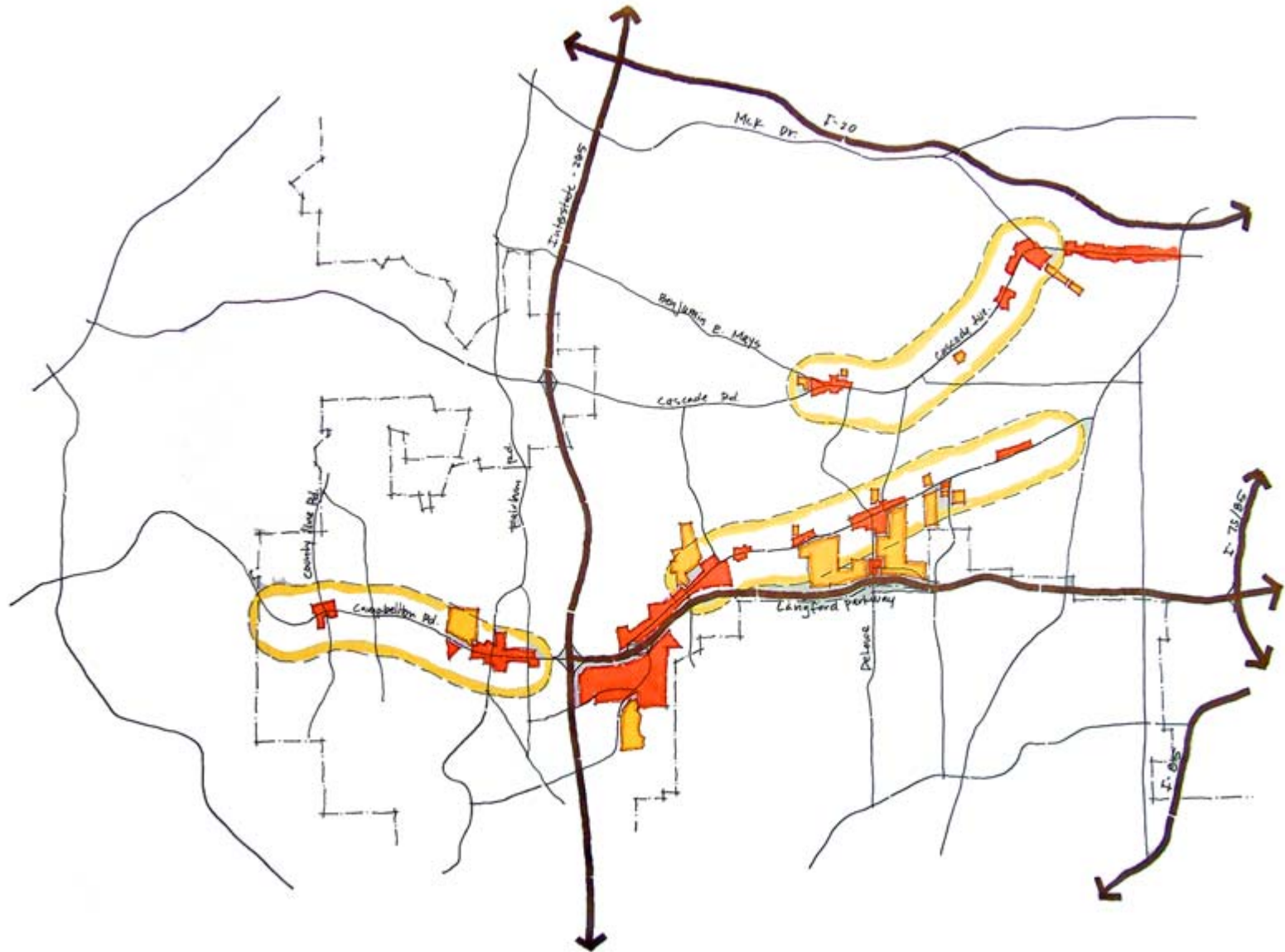


# The Big Picture: Parks & Open Space





# The Big Picture: Commercial & Multi-Family



# "Three Corridors"







**Commercial**

**Residential**

**Parks**

**Parcel Size**

**Transportation**

Land  
Parcels  
+2 Acres

## Land Use – Future Development



### No Change

- Established Neighborhood, No Commercial Activity

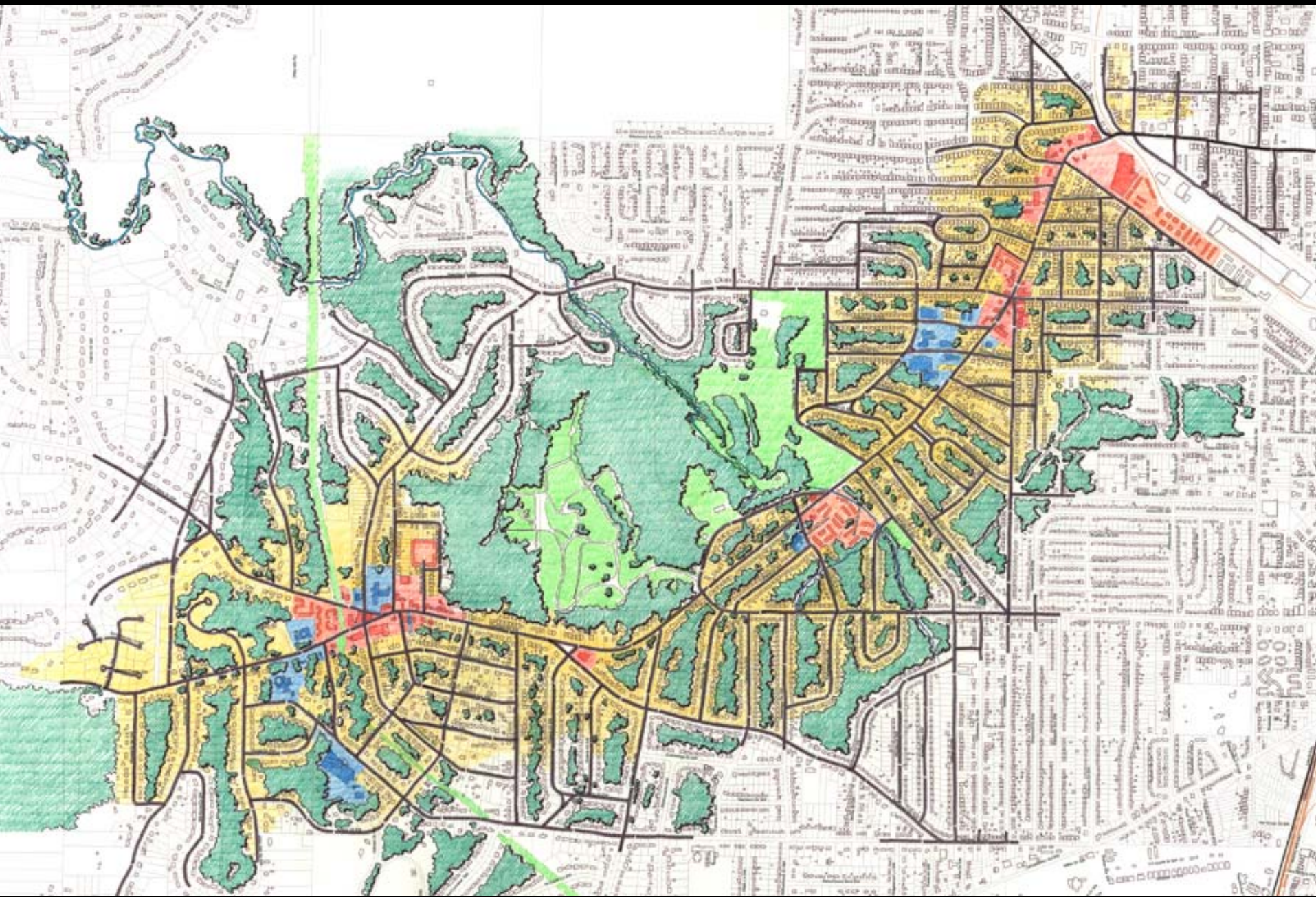
### Incremental Change

- Established Neighborhoods, Small Parcels, Establish Land Use

### Probable Change

- Large Parcels, High Land Value, Transitional Uses







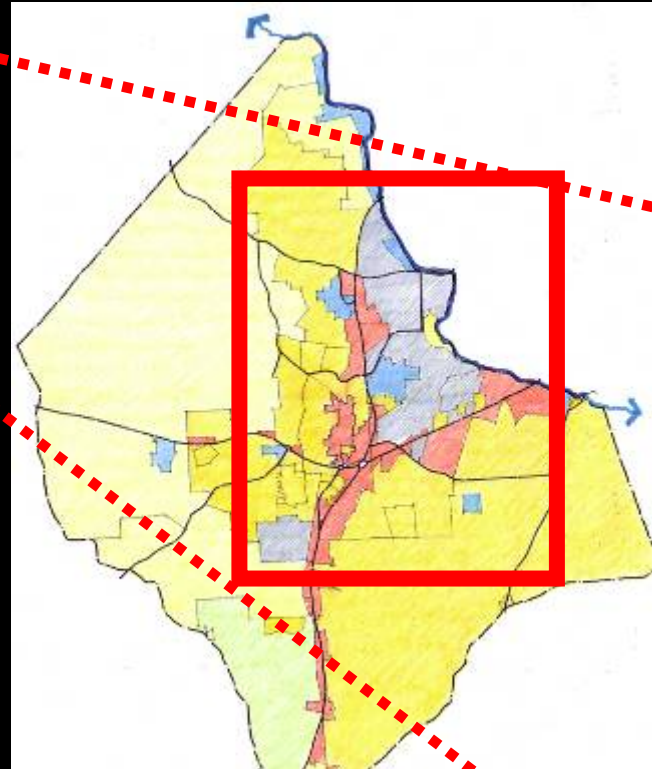
# Understanding Context:

## Market & Development

# Land Use Patterns at Different Scales

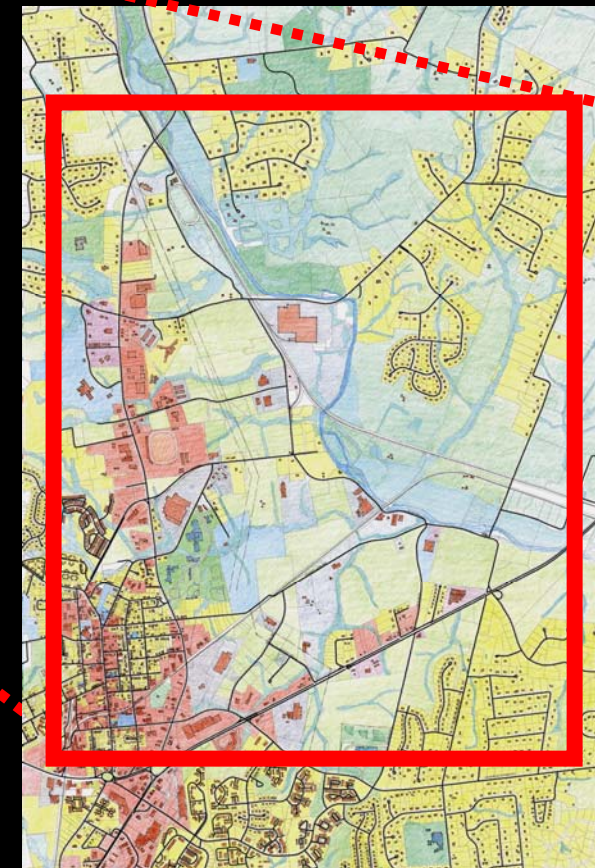


**Regional**

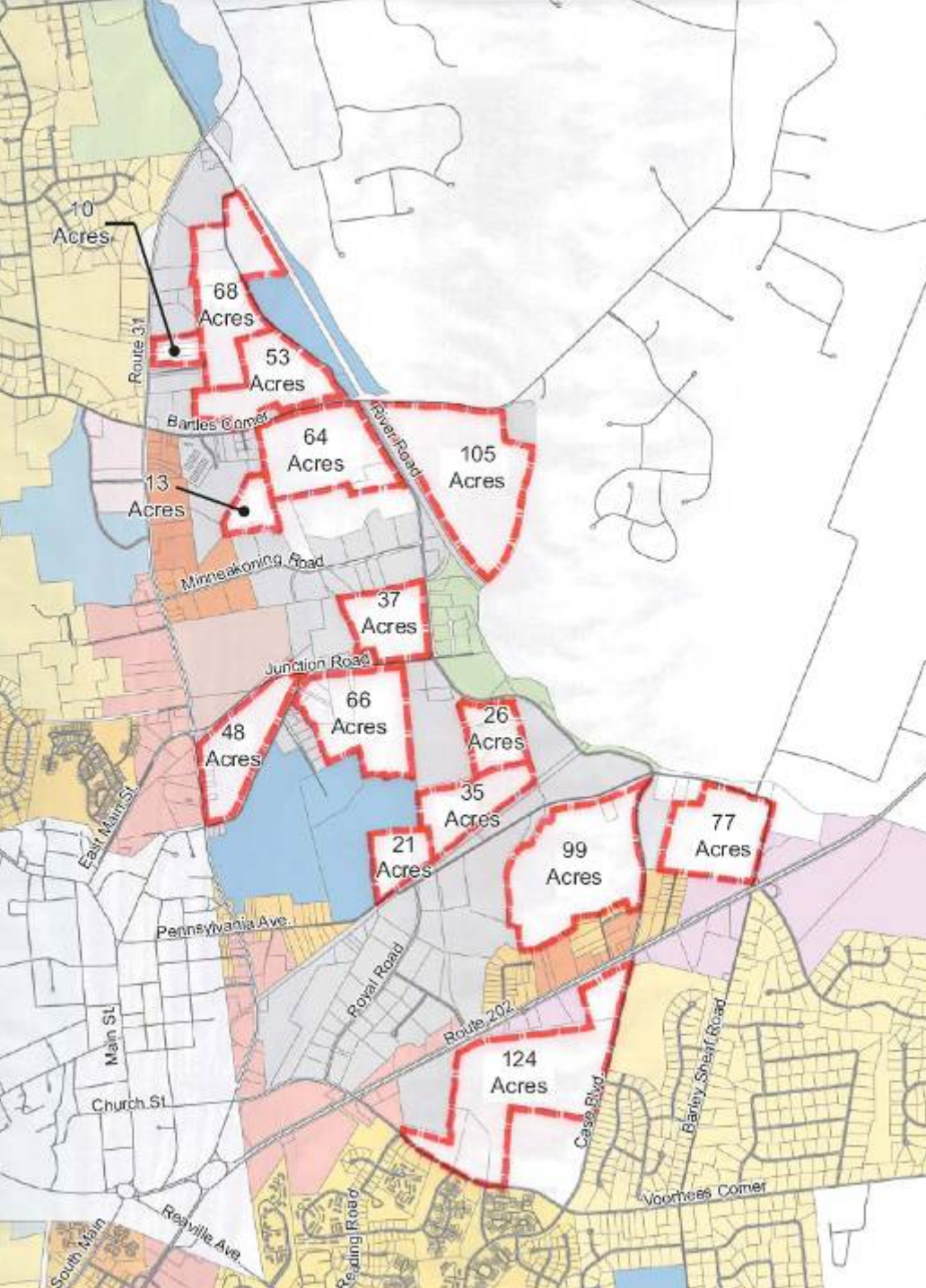


**Local**

**Study Area**



# Parcels “in play”

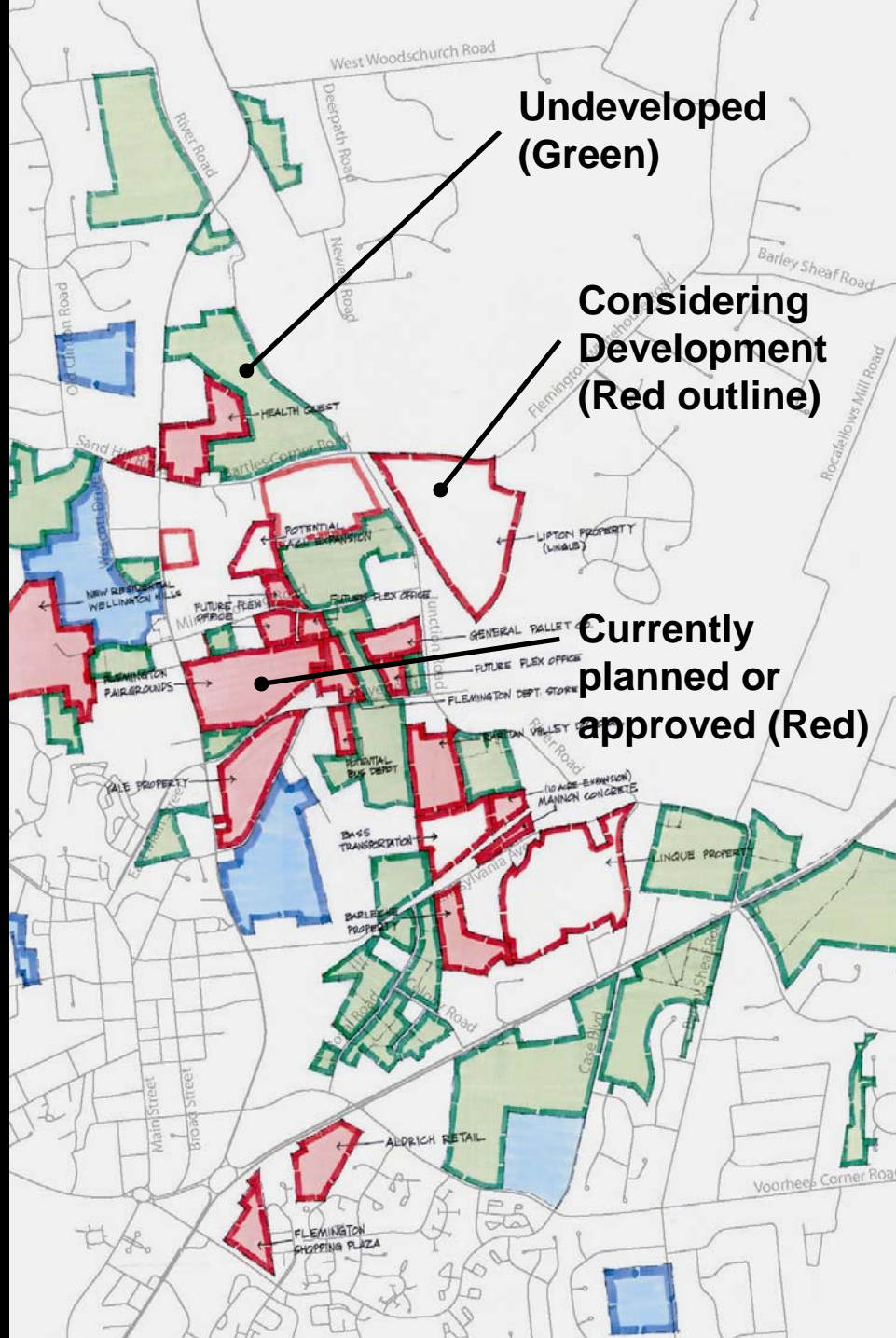


- Parcels where change is possible
- Primarily undeveloped or “under” developed
- Additional parcels have been identified

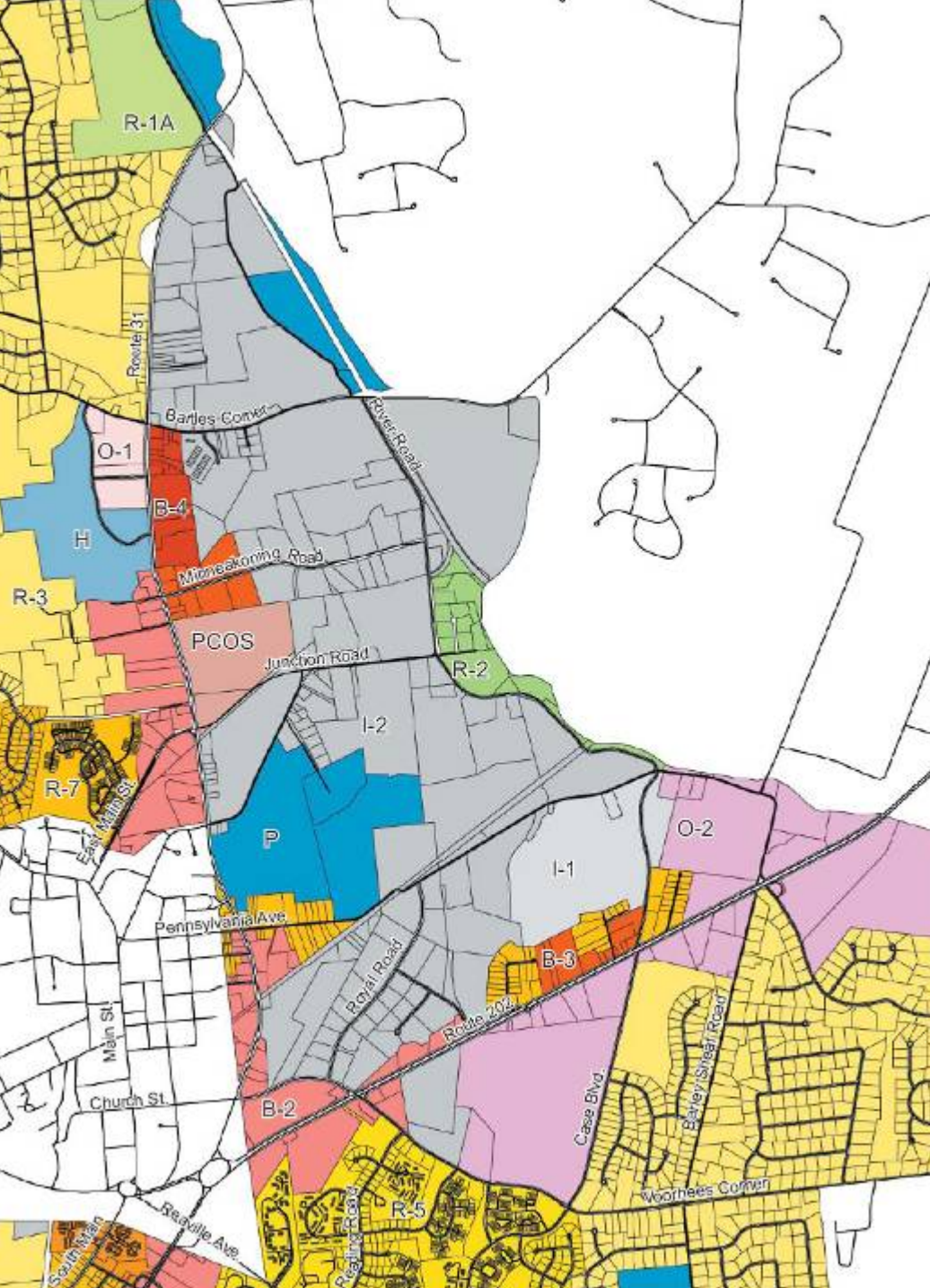


## Development Pressure

- Lots of moving pieces that can still be influenced



# Zoning



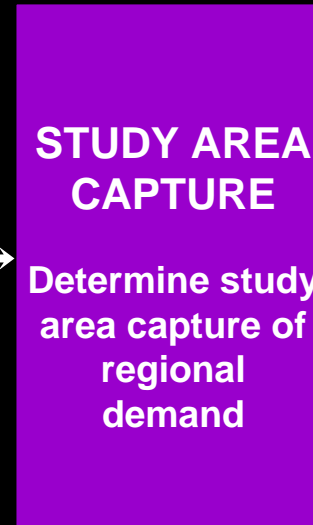
- Potential over supply of Industrial zoning
- Relatively “weak” market demand for industrial
- Township desire to protect open space and natural resources



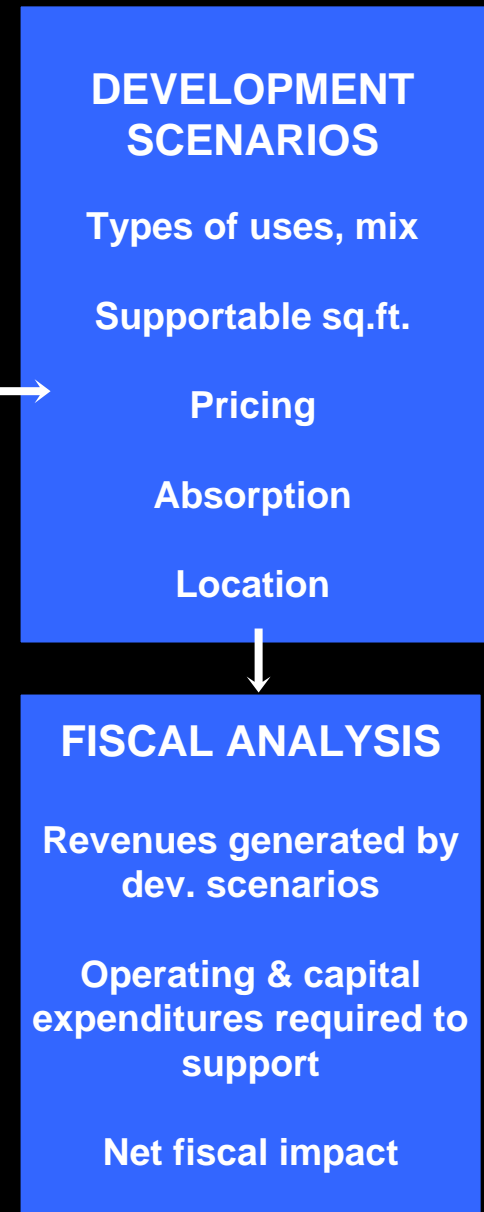
## ***Data/Research***



## ***Market Analysis***



## ***Conclusions***



# Market Opportunities: 2005-2015

Land use	Opportunity	Comment
Primary Home Residential	High	Demand will be strong for housing of all types. Study Area will be able to support demand for higher-density product.
Age-Restricted Residential	High	Estimated demand of 120 to 150 homes per year, with initial projects benefiting from pent-up demand, and later projects benefiting from growth in target market segment.
Retail	Moderate	Recent development and approvals have served much of pent-up demand, but opportunities still exist in underserved market segments. Opportunity to strengthen Main Street retail.
Office	Moderate-Low	Primary drivers are medical office and local-serving professional services. Planned projects likely serving existing demand in the near term, with significant older space still available.
Flex	Moderate	Pent-up demand due to development constraints represents an opportunity. Flexible space concept able to target a diverse tenant base, making it a more attractive speculative investment.
Industrial	Moderate	Pent-up demand due to development constraints represents an opportunity, although total depth of local-serving demand is likely more limited. Niche opportunity in large warehouse/logistics sector.



# **Understanding Context:** **Historic Patterns**

## Typical Mall Development – 1960s



- Rural Road Network
- Little commercial development

## Typical Mall Development– 1980s



- Mall Developed
- Growing commercial development along Lee Highway
- Expanding residential development



## Typical Mall Development– 1990s



- Mall becomes a regional center (expanding commercial development)
- Residential redevelopment (rural lot conversion to higher density)

## Typical Mall Development– 2001s



- Mall is a successful regional commercial center
- Expanding commercial development begins to impact neighborhoods
- +/- 3 Million S.F. of retail development, +/- 100's new residential units
- **No new road network since 1960s**

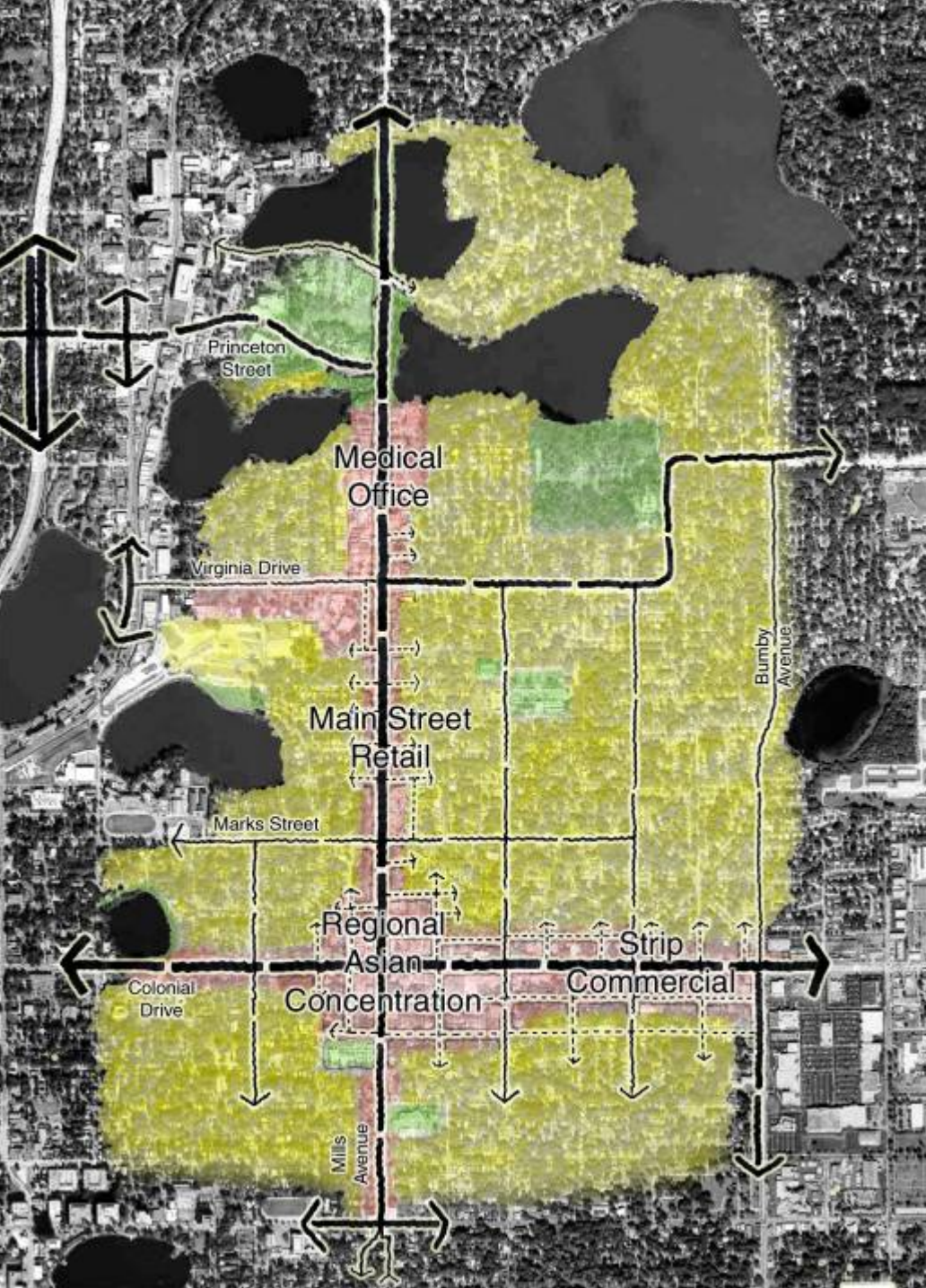


**Context:**

**How does it drive solutions?**

**Scale 1: Within a Street**





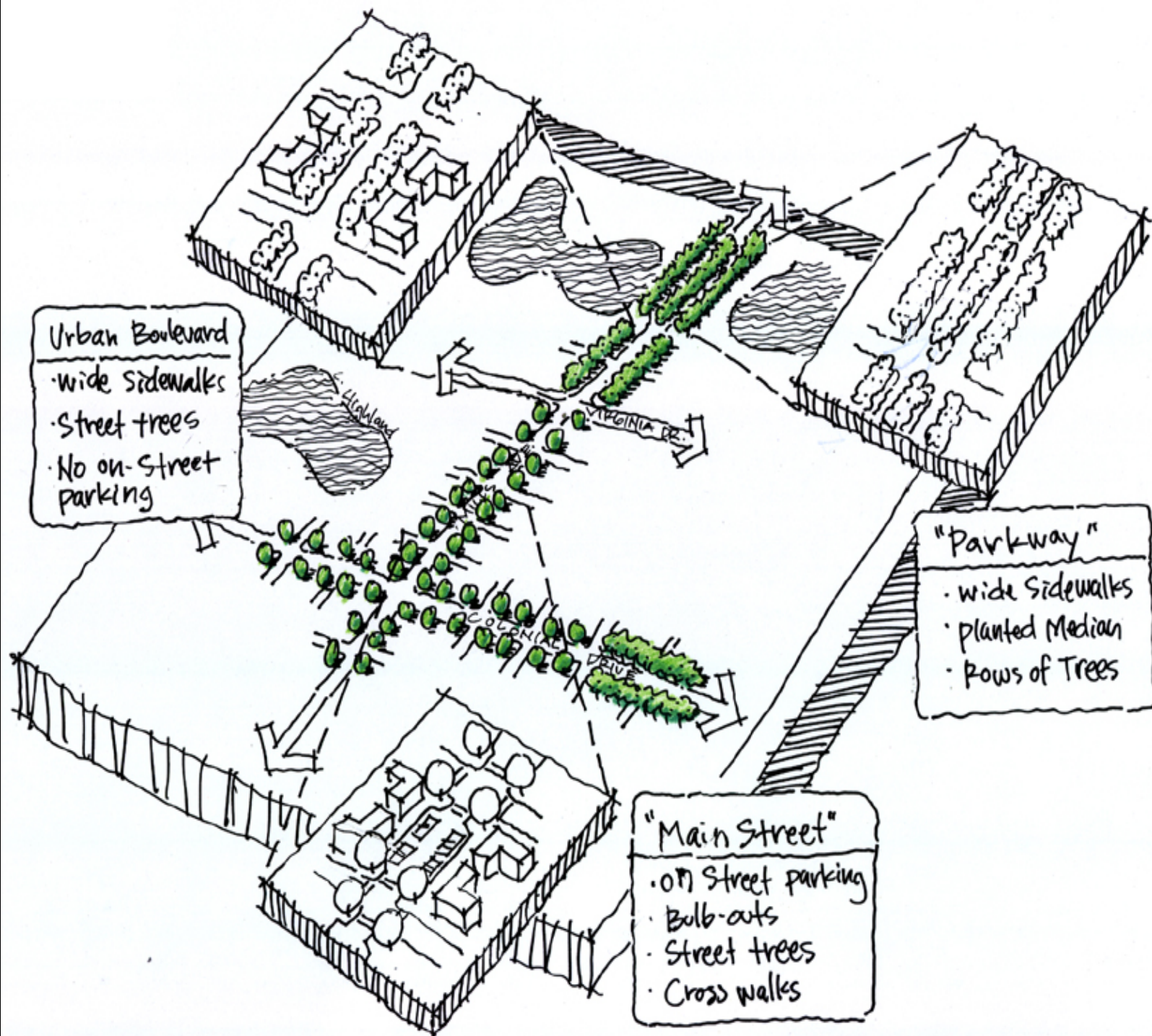
## What's Good

- Some of Orlando's most desirable urban neighborhoods
- Many valuable Community Amenities
- Unique business districts

## What's Bad

- Mills and Colonial are places for cars – not people.
- They separate Neighborhoods, hold land values down, & act as a barrier to community life, reinvestment, and civic identity
- The Community struggles & retreats from this hostile situation – its waiting





### Urban Boulevard

- wide sidewalks
- Street trees
- No on-street parking

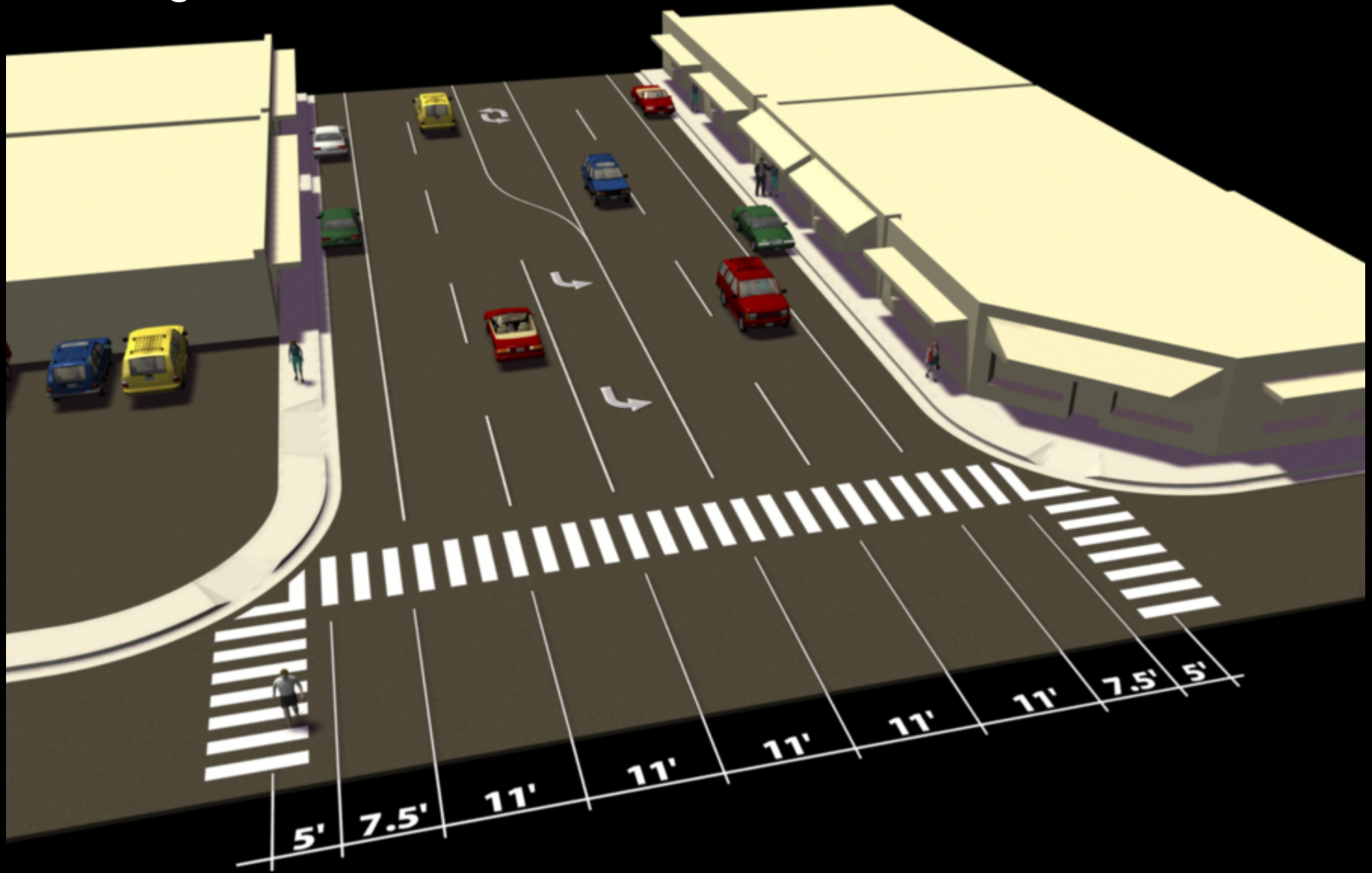
### "Parkway"

- wide Sidewalks
- planted Median
- Rows of Trees

### "Main Street"

- on Street parking
- Bulb-outs
- Street trees
- Crosswalks

# Existing Street





The cars are winning! New development struggles against a really harsh environment





Streetscape improvements will create a better place for people helping to support existing businesses



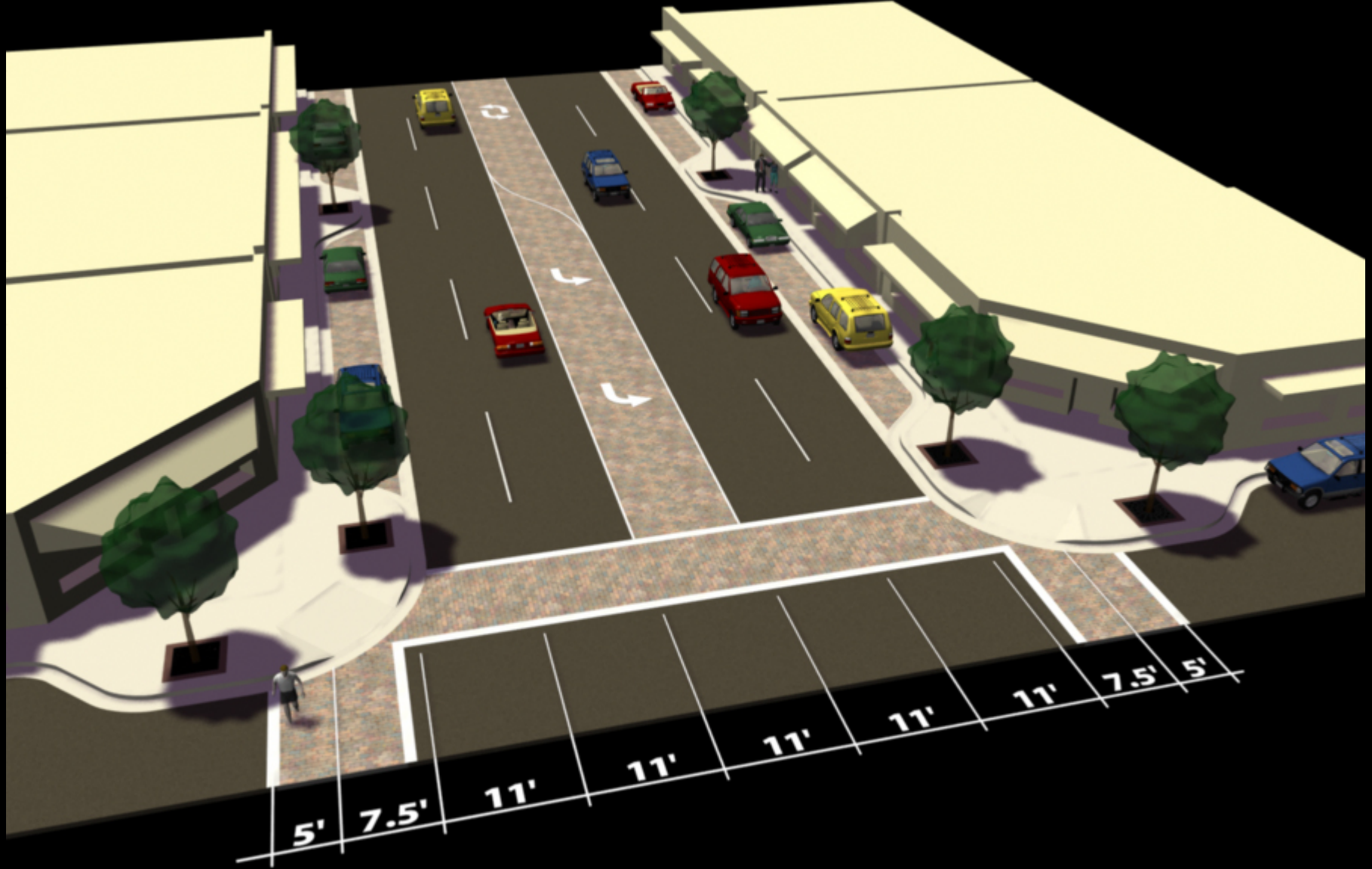


# Redesign intersections and streetscape treatment – trees and wide sidewalks





# Redesign intersections and on-street parking



The cars are winning! The existing street is hostile to reinvestment and property values



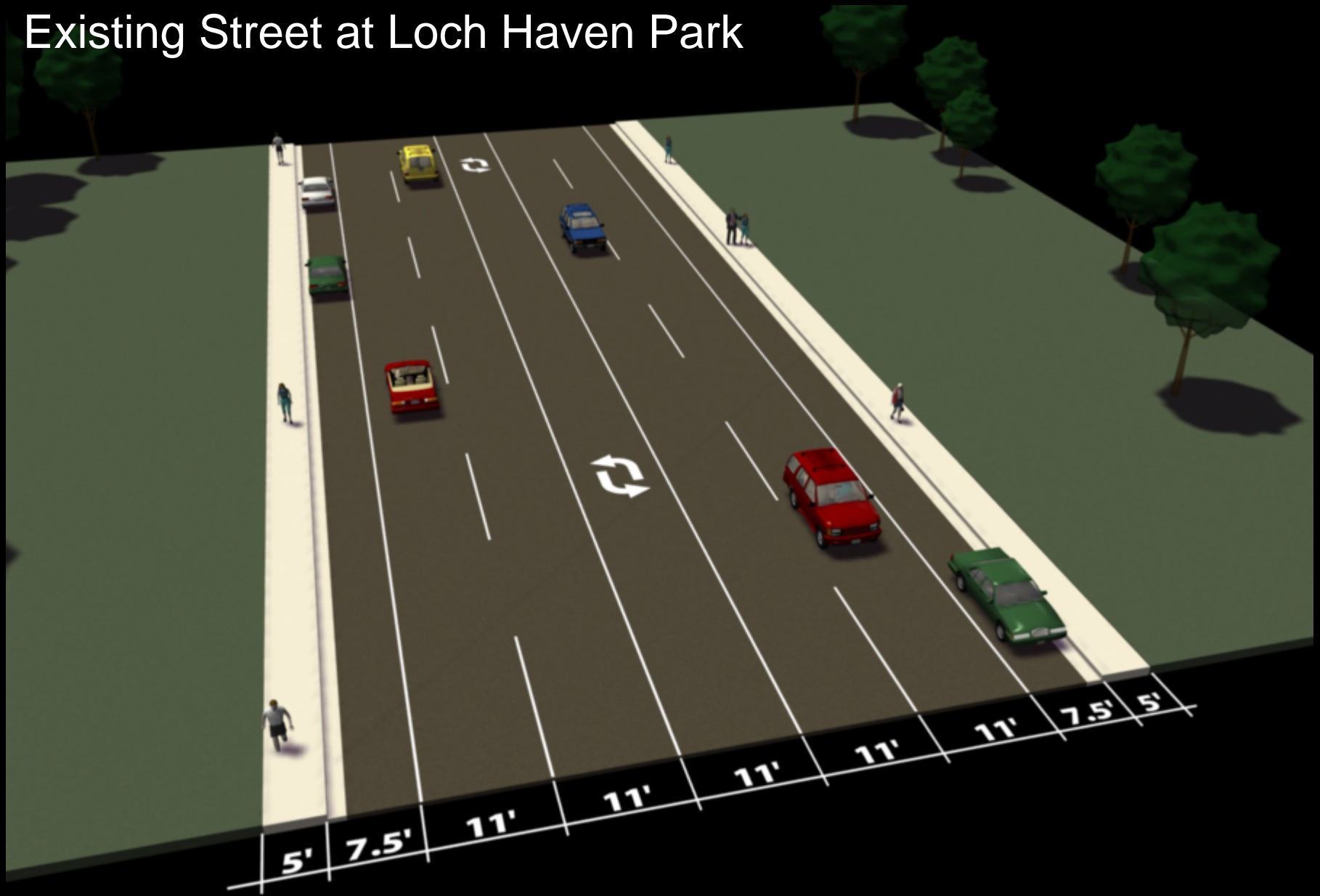


The revitalized street can also support on-street parking

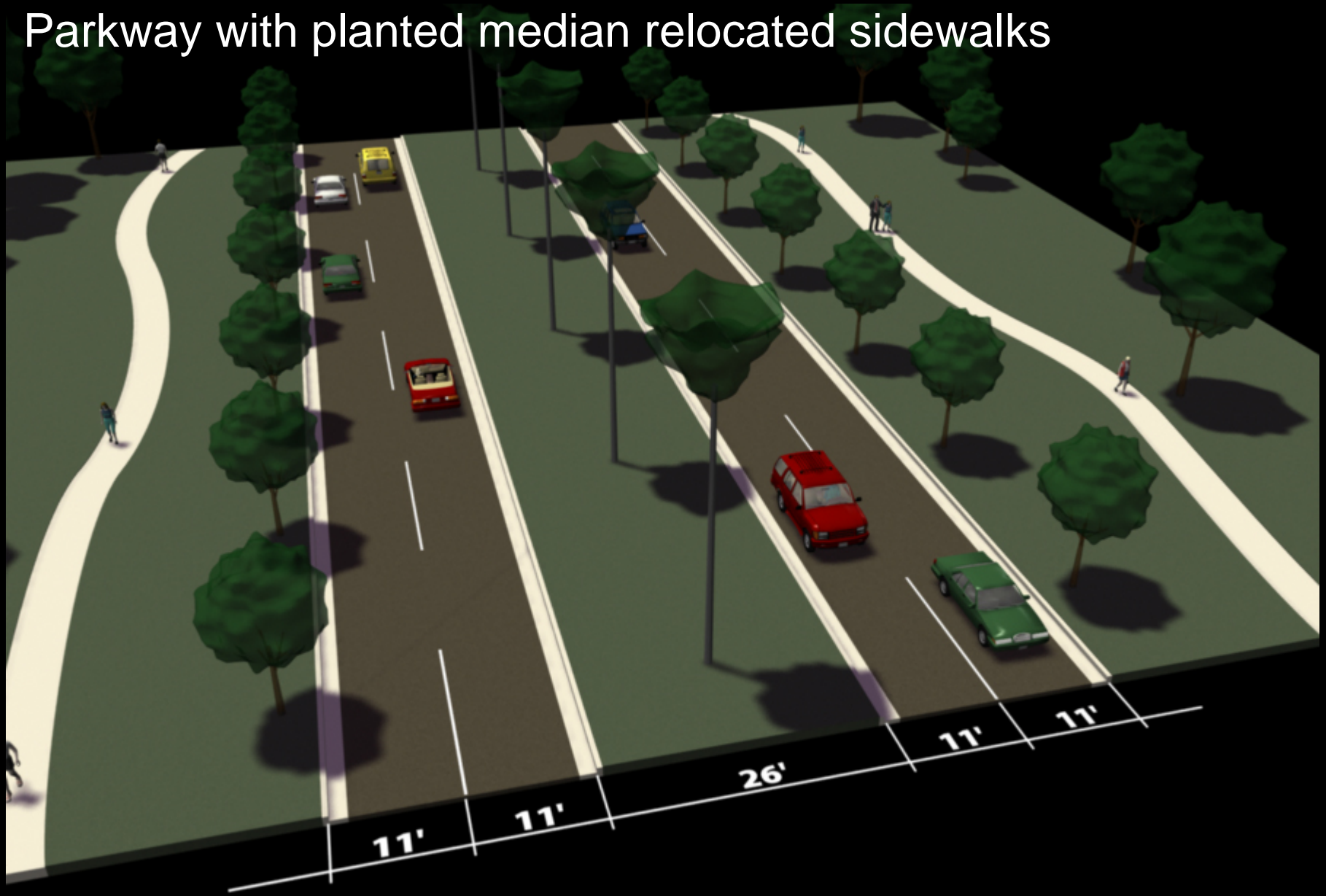




# Existing Street at Loch Haven Park



# Parkway with planted median relocated sidewalks



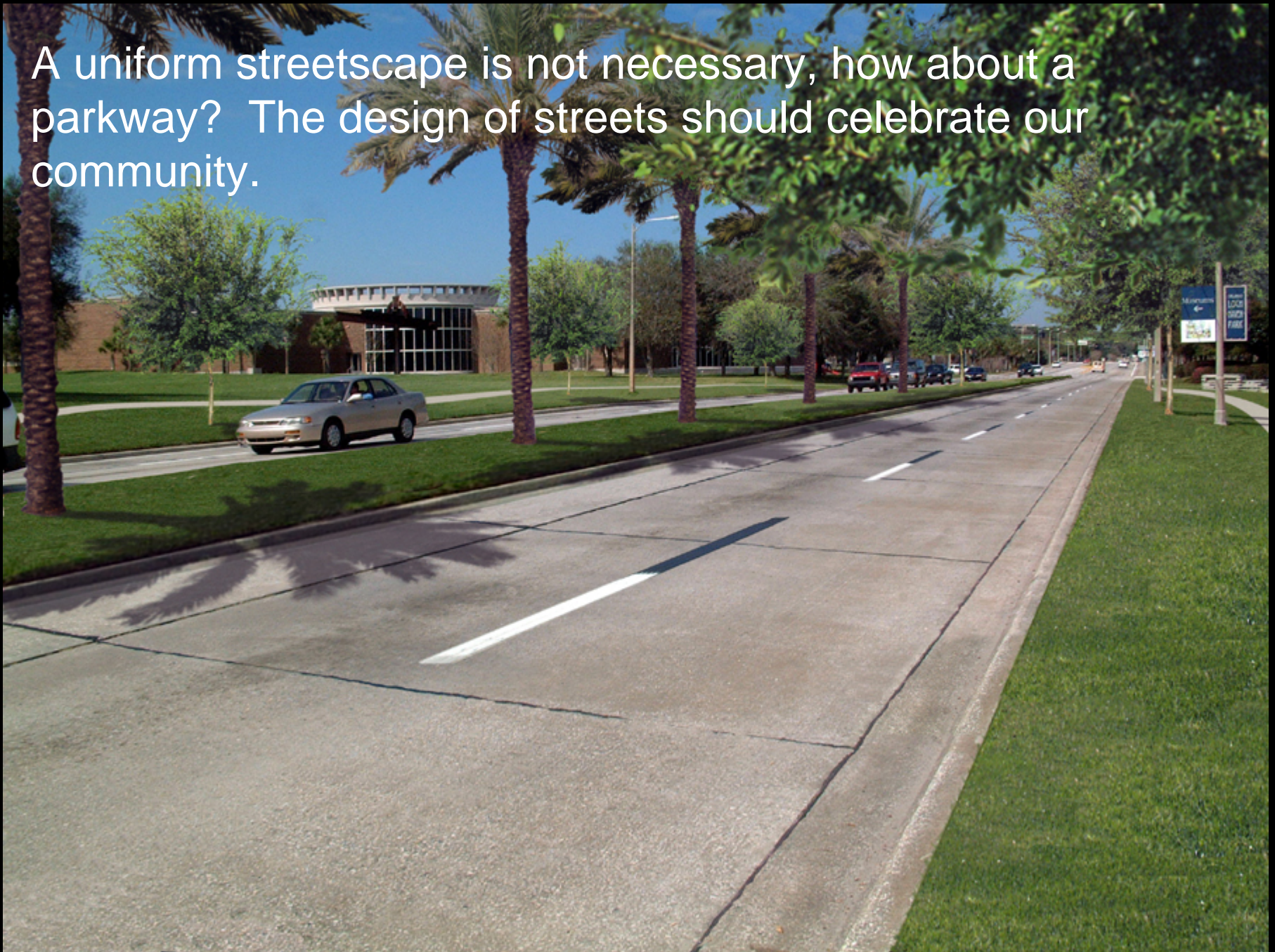


Streets are public resources that must be positioned to support community goals, unique character & amenities, and the liveability/desirability of our neighborhoods





A uniform streetscape is not necessary, how about a parkway? The design of streets should celebrate our community.





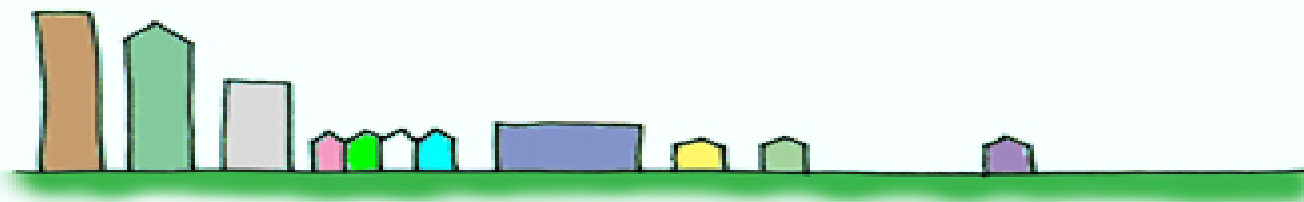
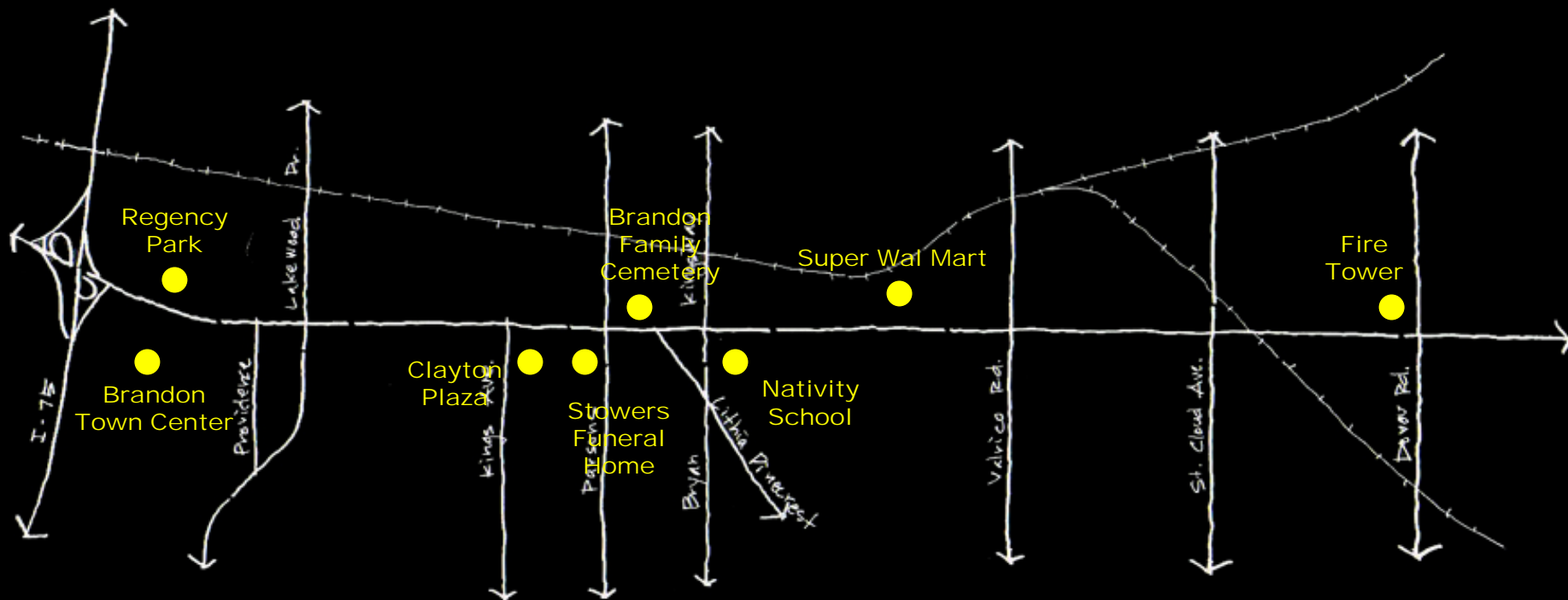


**Context:**

**How does it drive solutions?**

**Scale 2: Within a Corridor**

# The Study Area

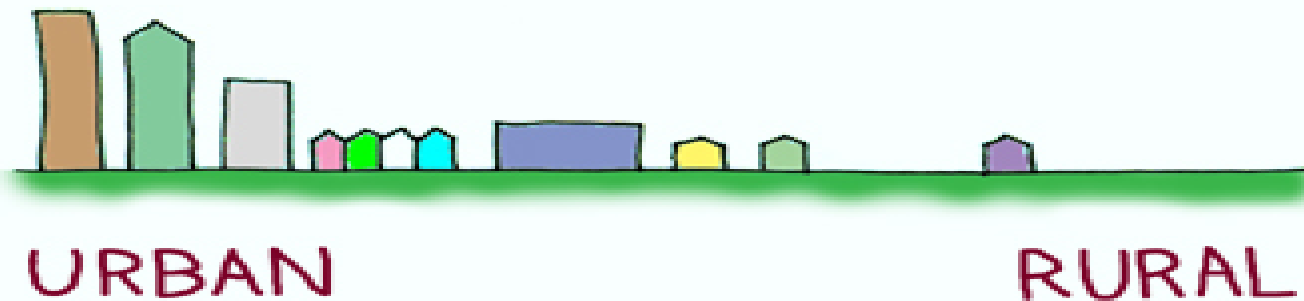
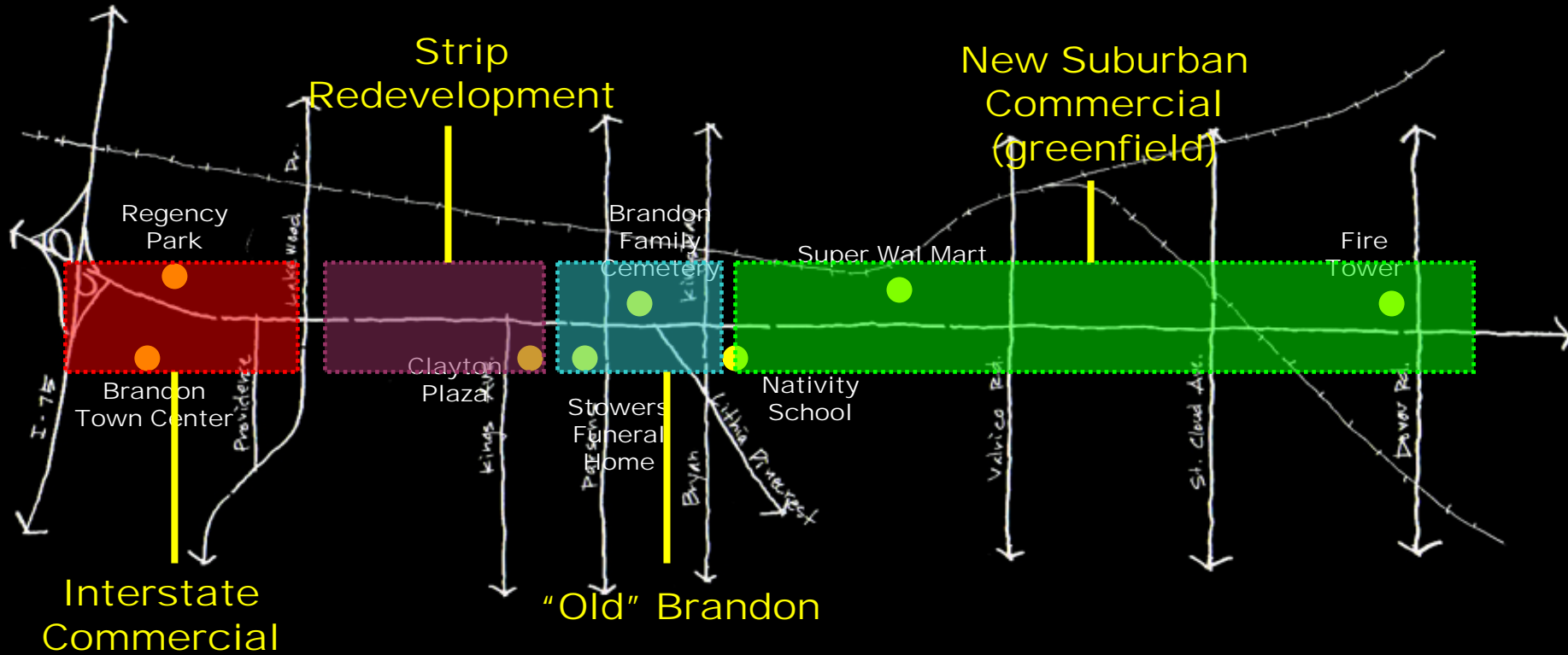


URBAN

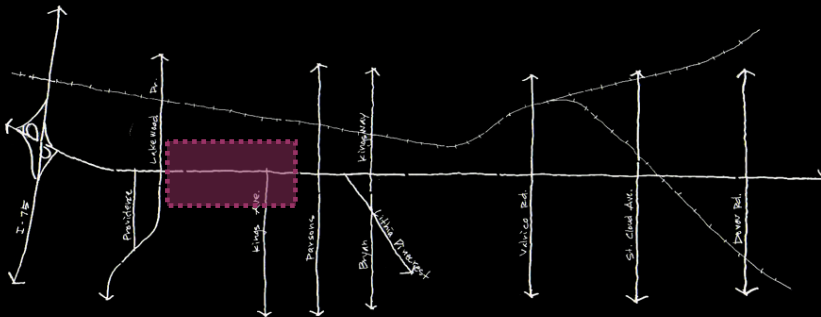
RURAL



# The "Districts"



# The Districts: Strip Redevelopment



## Issues:

- Lack of coordination between private improvements & public ROW
- Smaller parcels, older development - redevelopment will be slow
- May need public investment



# Incremental "Big Box" Redevelopment



# Incremental "Big Box" Redevelopment

Phase 1: Private reinvestment in site landscape and parking lot

Establish "triggers" to require  
parking lot landscaping at  
specified levels of reinvestment

Establish "triggers"  
for signage controls





# Incremental "Big Box" Redevelopment

Phase 2: Public/Private reinvestment in ROW





# Incremental "Big Box" Redevelopment

Phase 3: Private redevelopment

"Build to" lines bring buildings closer to the street and dramatically change the character of development



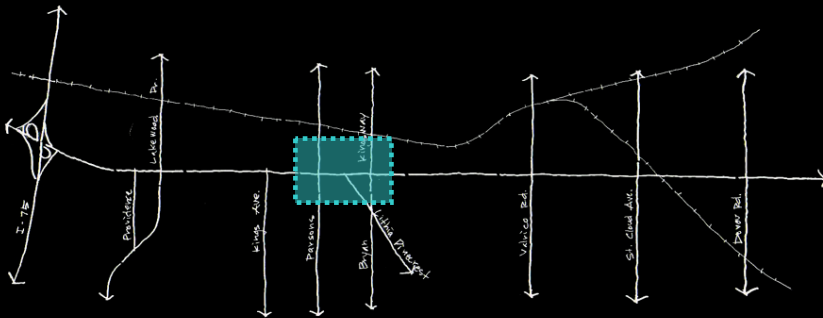


# The Districts: "Old" Brandon



## Issues:

- Has "historic" landmarks (Stowers Funeral Home, The Brandon Family Cemetery)
- The most visually ugly
- Smaller parcels, older development - redevelopment will be slow
- Narrower right-of-way (urban street section)
- May need public investment



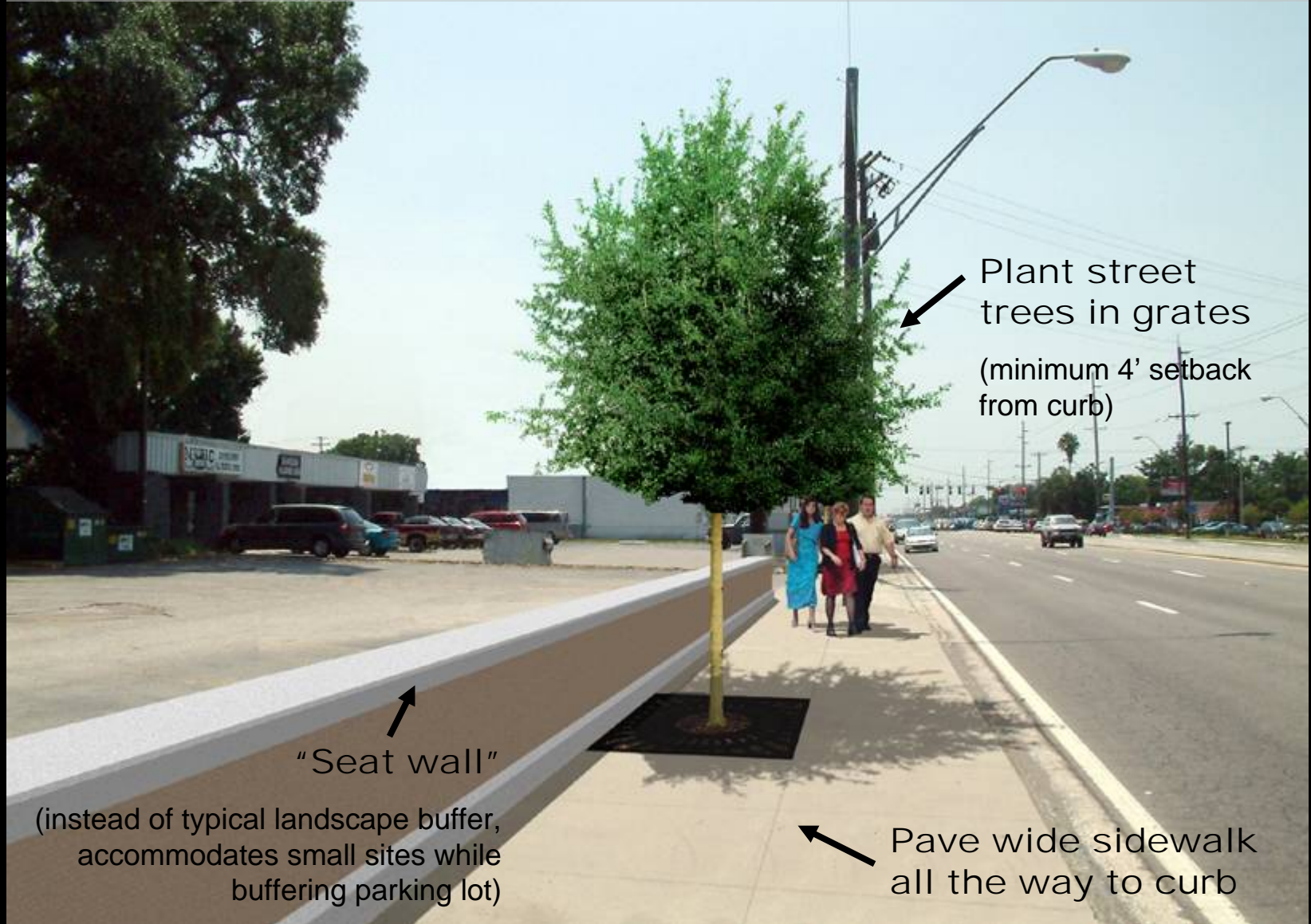
# "Old" Brandon Commercial Redevelopment





# "Old" Brandon Commercial Redevelopment

Phase 1: Public street improvements w/some private investment



# "Old" Brandon Commercial Redevelopment

Phase 2: Private redevelopment

New buildings built closer to the street

Pedestrian access to building entrance



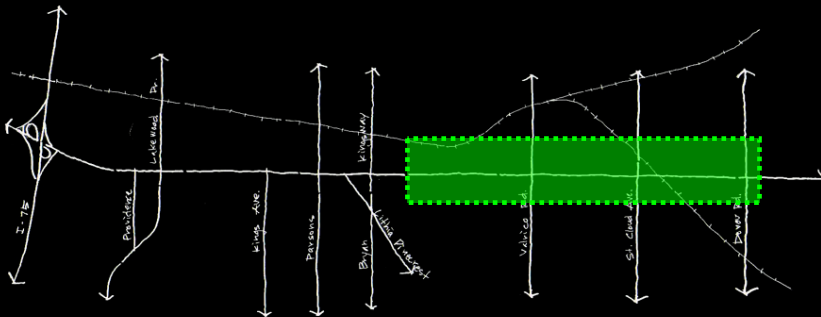


# The Districts: New Suburban Commercial



## Issues:

- Lots of undeveloped commercial property
- New developments (Wal Mart)
- Code seems to be working
- Should incorporate landscape design with public ROW (sidewalks & street trees)
- Large right-of-way (some rural, some urban street sections)





# Design Alternative: "Suburban" vs. "Urban"

Typical "suburban" buffer design, per current code



Right of Way

No street trees in public ROW

Sidewalk too close to street



# Design Alternative: "Suburban" vs. "Urban"

Phase 1: Public/Private reinvestment in ROW





# Design Alternative: "Suburban" vs. "Urban"

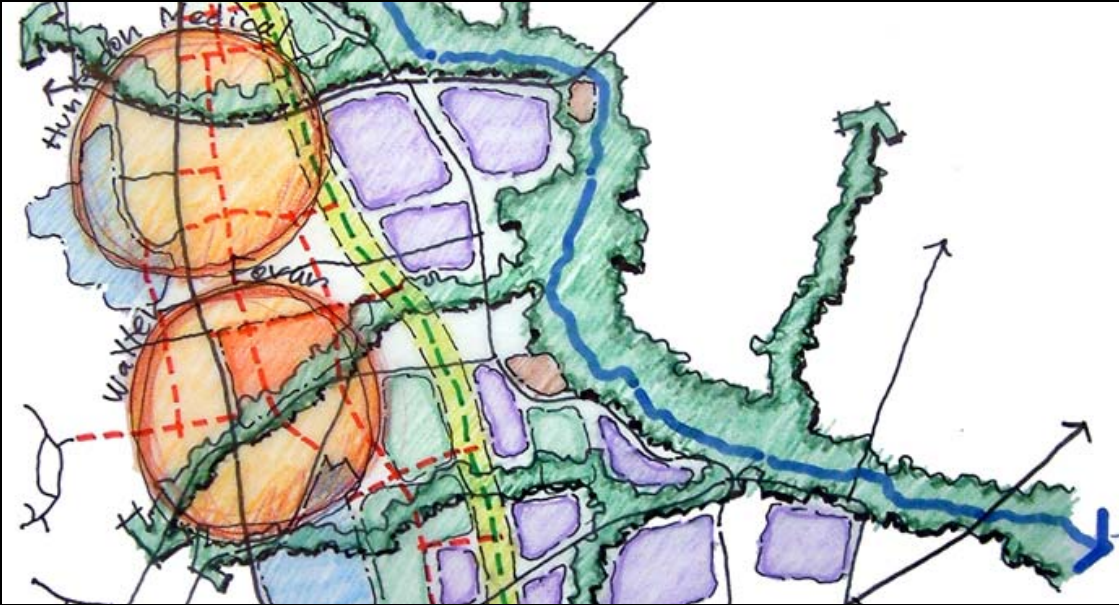
Phase 2: Private redevelopment built closer to the street

"Build to" line:

(requires less landscape, gives better visibility, creates a more pedestrian and transit friendly environment)





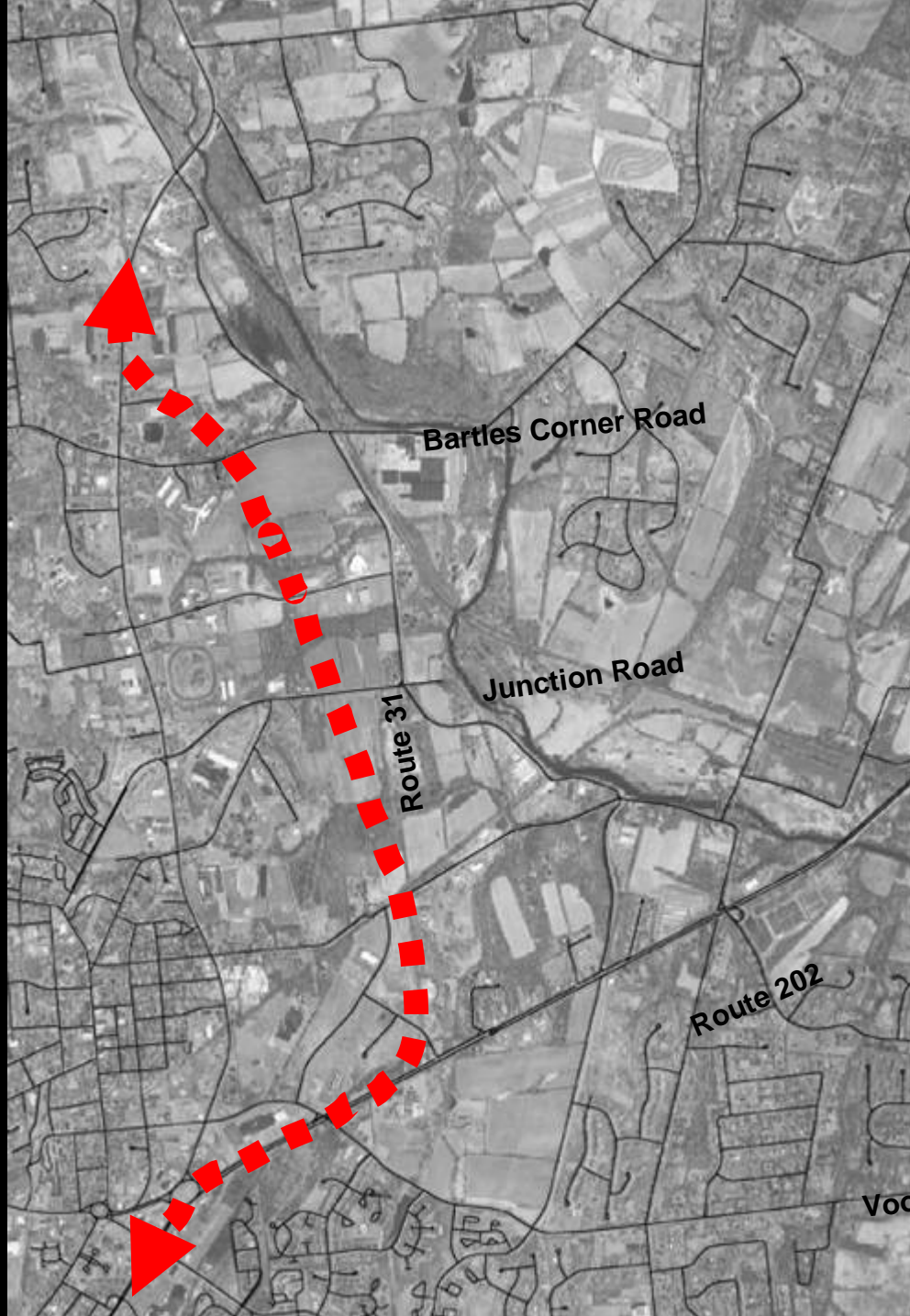


**Context:**

**How does it drive solutions?**

**Scale 3: Within a District**

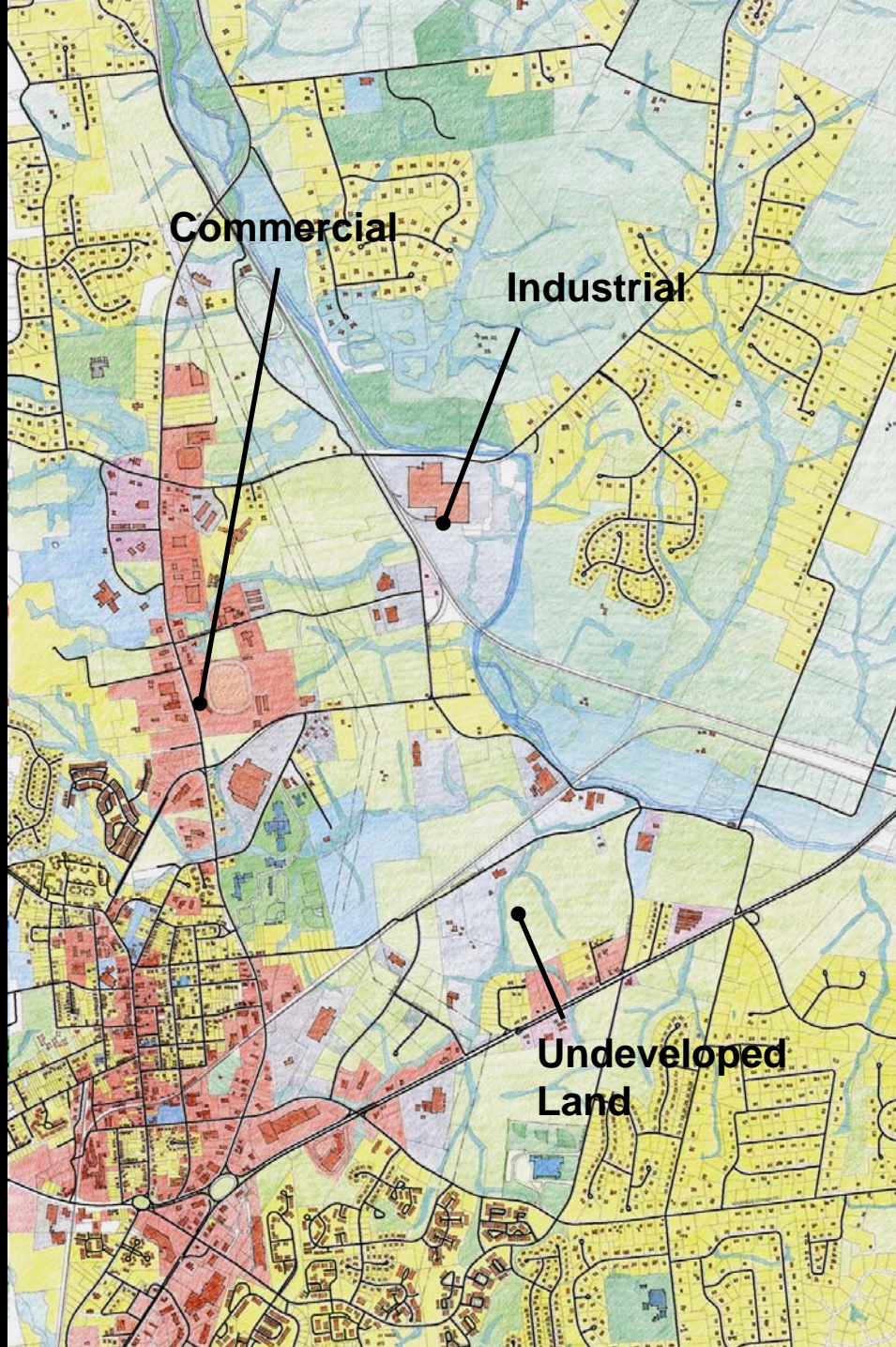
# Study Area





## Existing Land Use

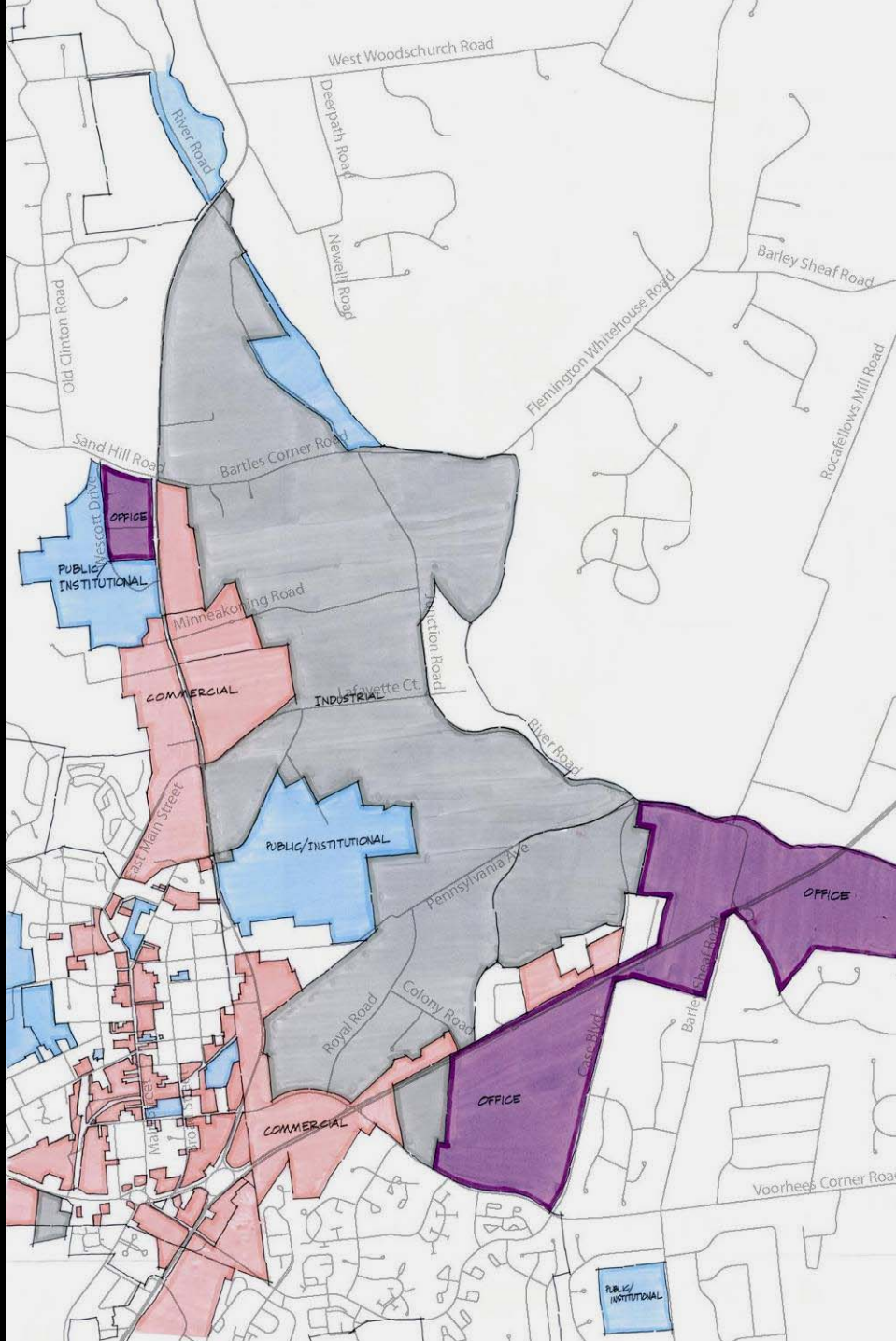
- Commercial strip development along Route 31 and US 202
- Undeveloped agricultural lands converting to commercial and industrial uses
- Still lots of undeveloped land (opportunity to shape future development pattern)





## Existing Zoning

- Potential over supply of Industrial land
- Major commercial corridors (31 & 202) experiencing continued development





[illegible]

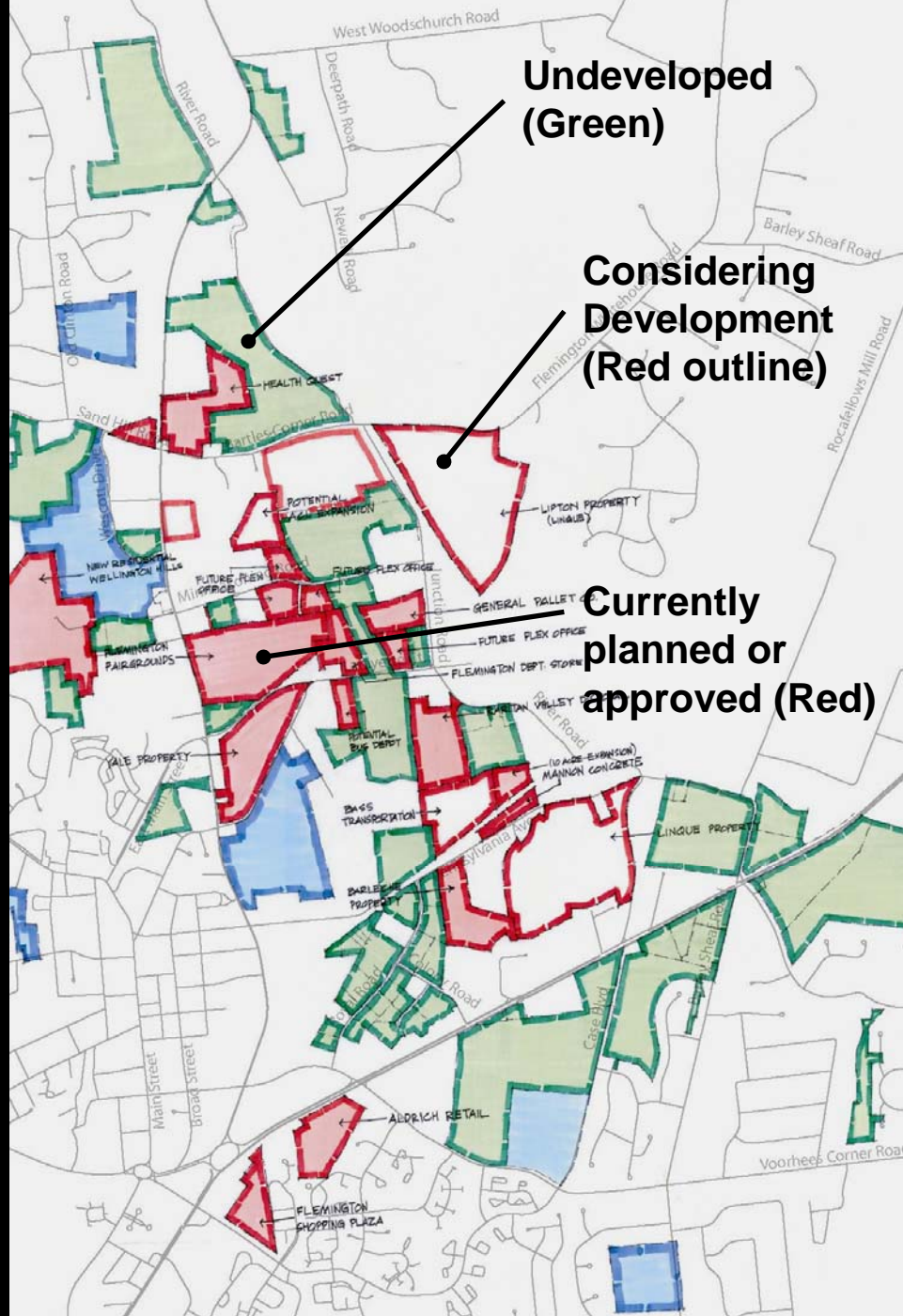
- 
- A blue historical marker sign stands in a grassy yard. The sign is rectangular with a decorative, arched top. At the top center of the arch is a circular seal featuring a profile of a man. The text on the sign is white and reads: "READING HOME", "BUILT IN 1760 FOR JOHN", "READING, GOVERNOR OF", "NEW JERSEY 1757 - 1758.", "READING SERVED 40", "YEARS ON PROVINCIAL", "COUNCIL." The sign is mounted on a metal post. In the background, there is a red brick house, green bushes, and a large tree with pink blossoms. A wooden fence is visible in the foreground.





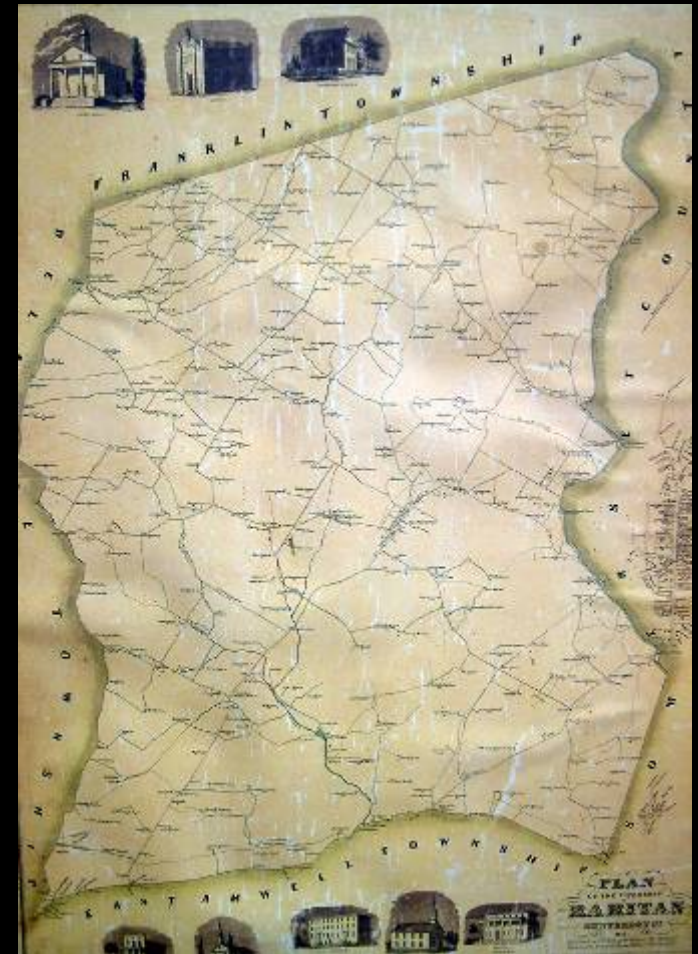
## Development Pressure

- Lots of moving pieces that can still be influenced



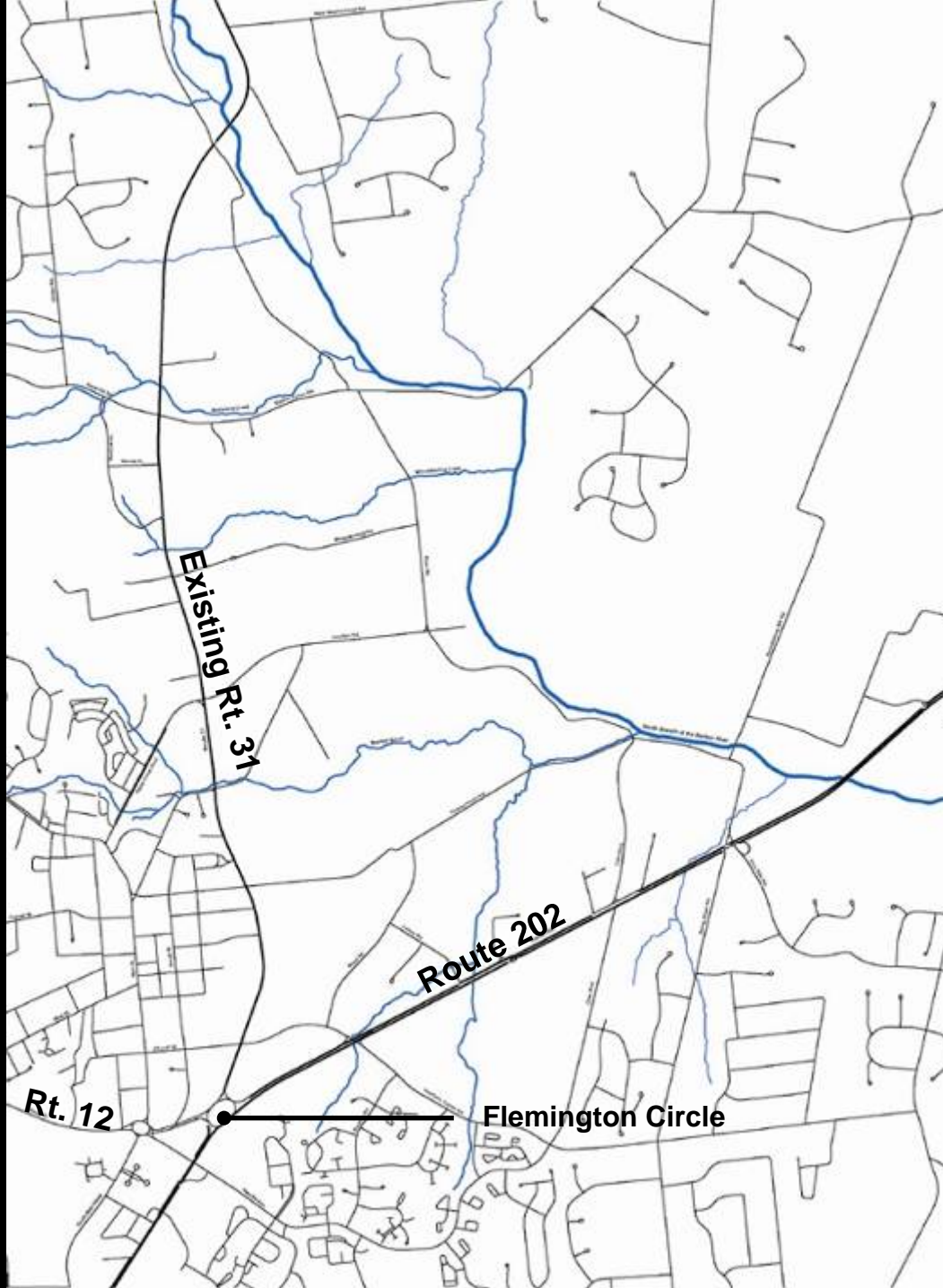


## A map of the South Branch River watershed. The river is shown as a blue line, and its tributaries are shown as thinner blue lines. The watershed boundary is marked by a red line. The location of Flemington is indicated by a red dot and labeled. The map shows the river flowing from the north towards the south, with several tributaries joining it from the west and south. The town of Flemington is located on the western side of the river, near its mouth.



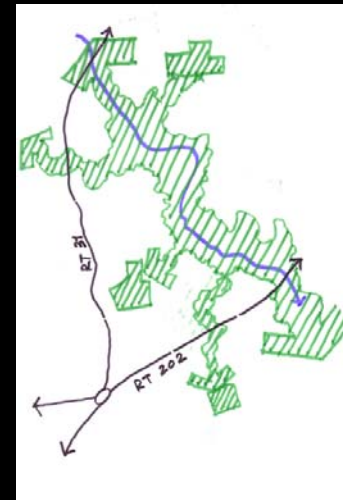
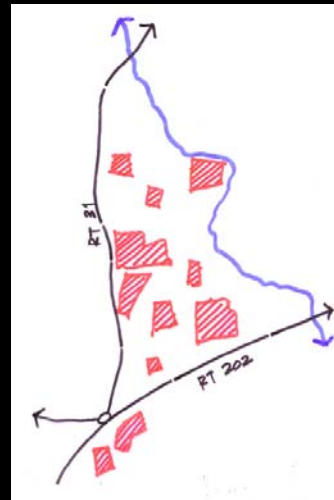
## Flemington Today

- Sparse Network
- Three routes all meet at “Flemington Circle”





# Context: Themes & Principles

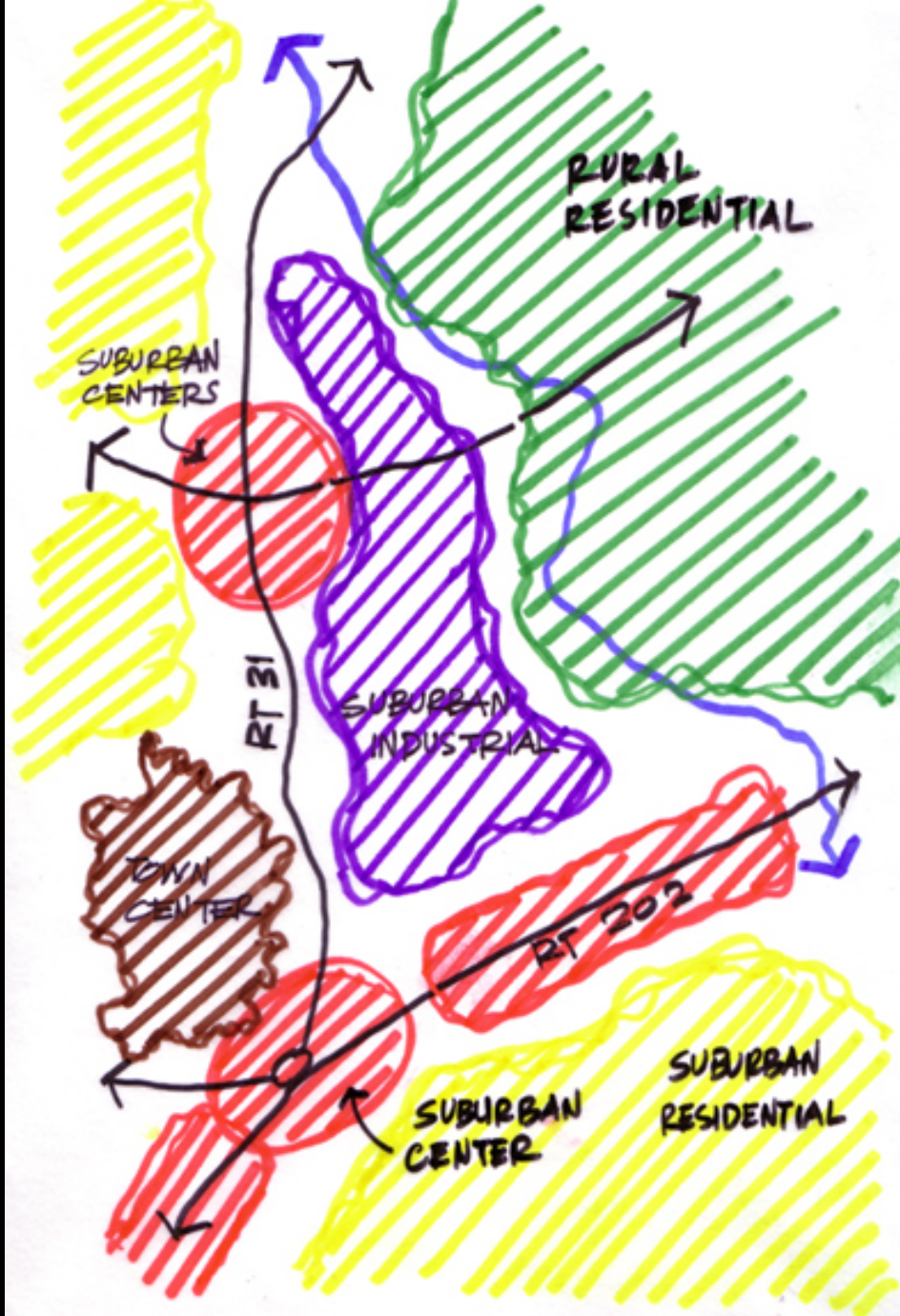


**Provide a  
Regional  
Alternative**

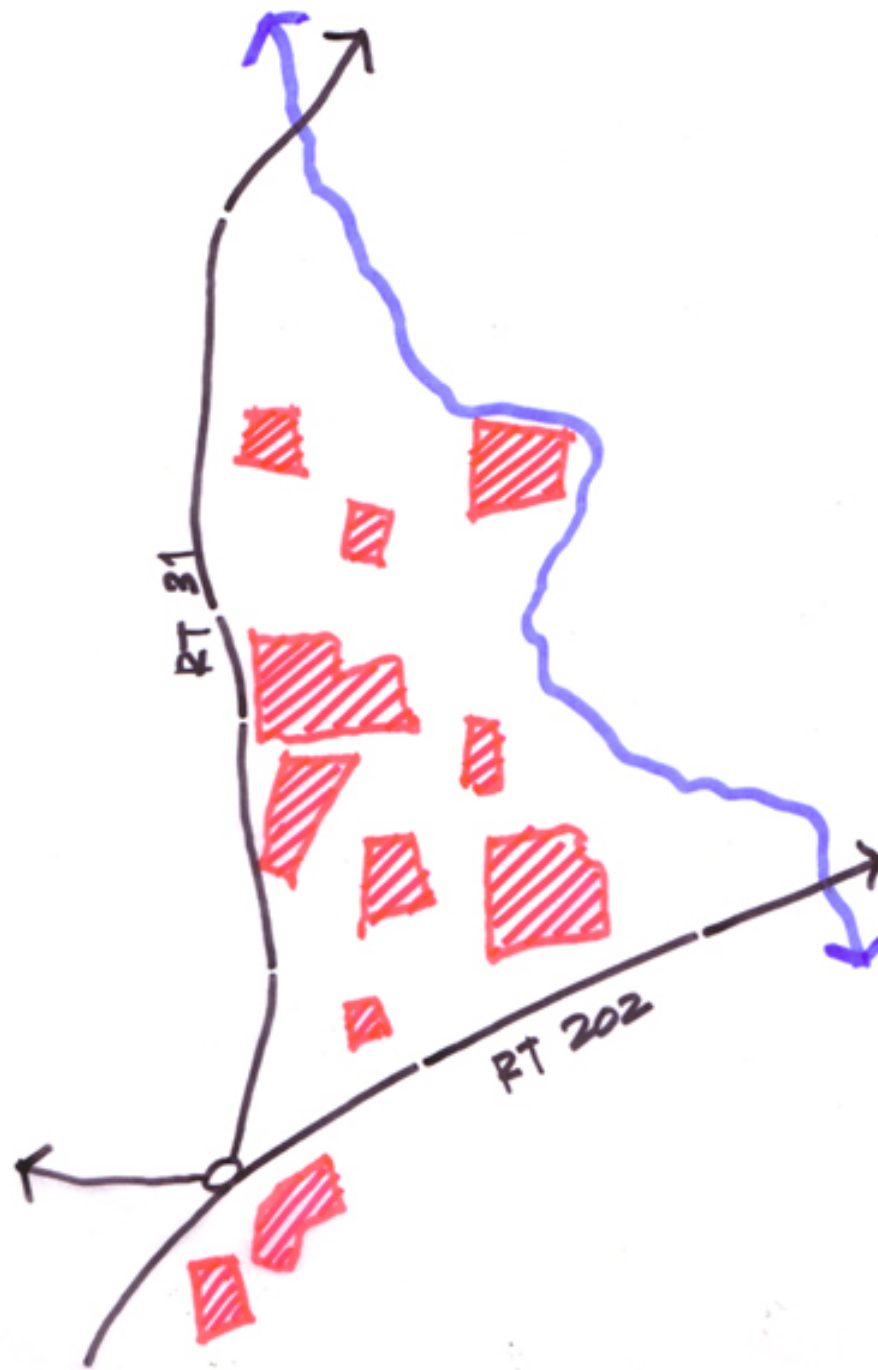




## Recognize Land Use Patterns

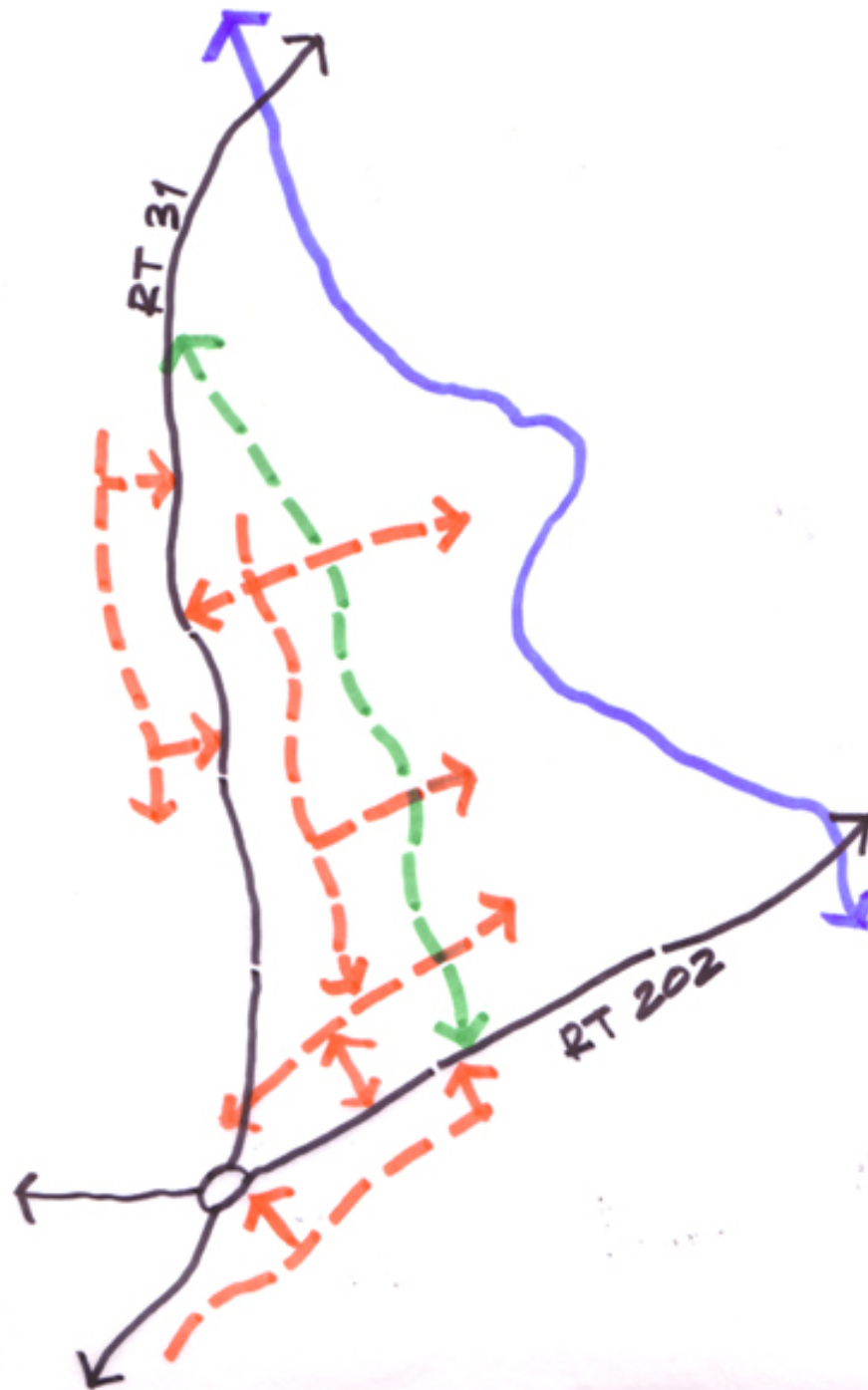


## Plan for Future Development

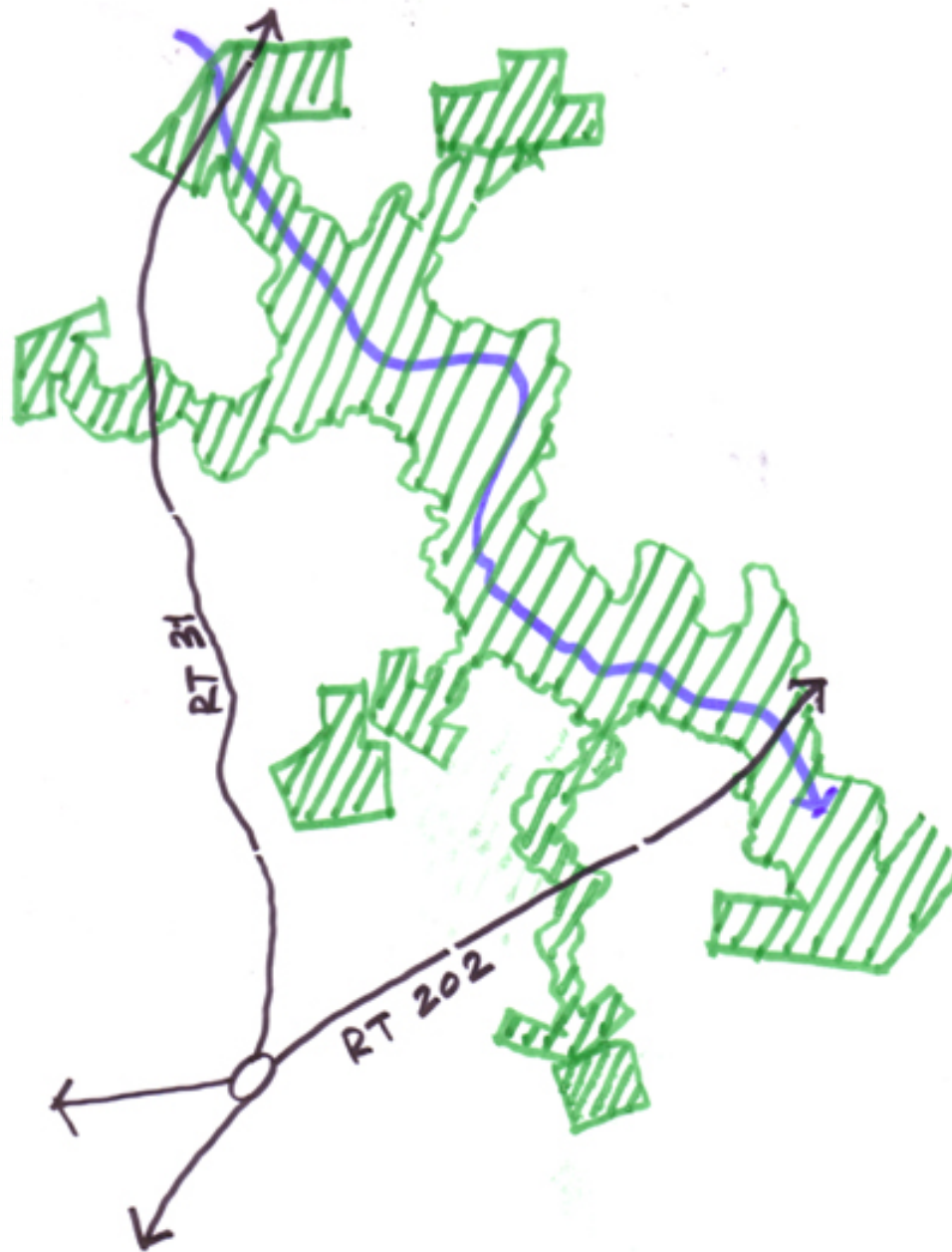




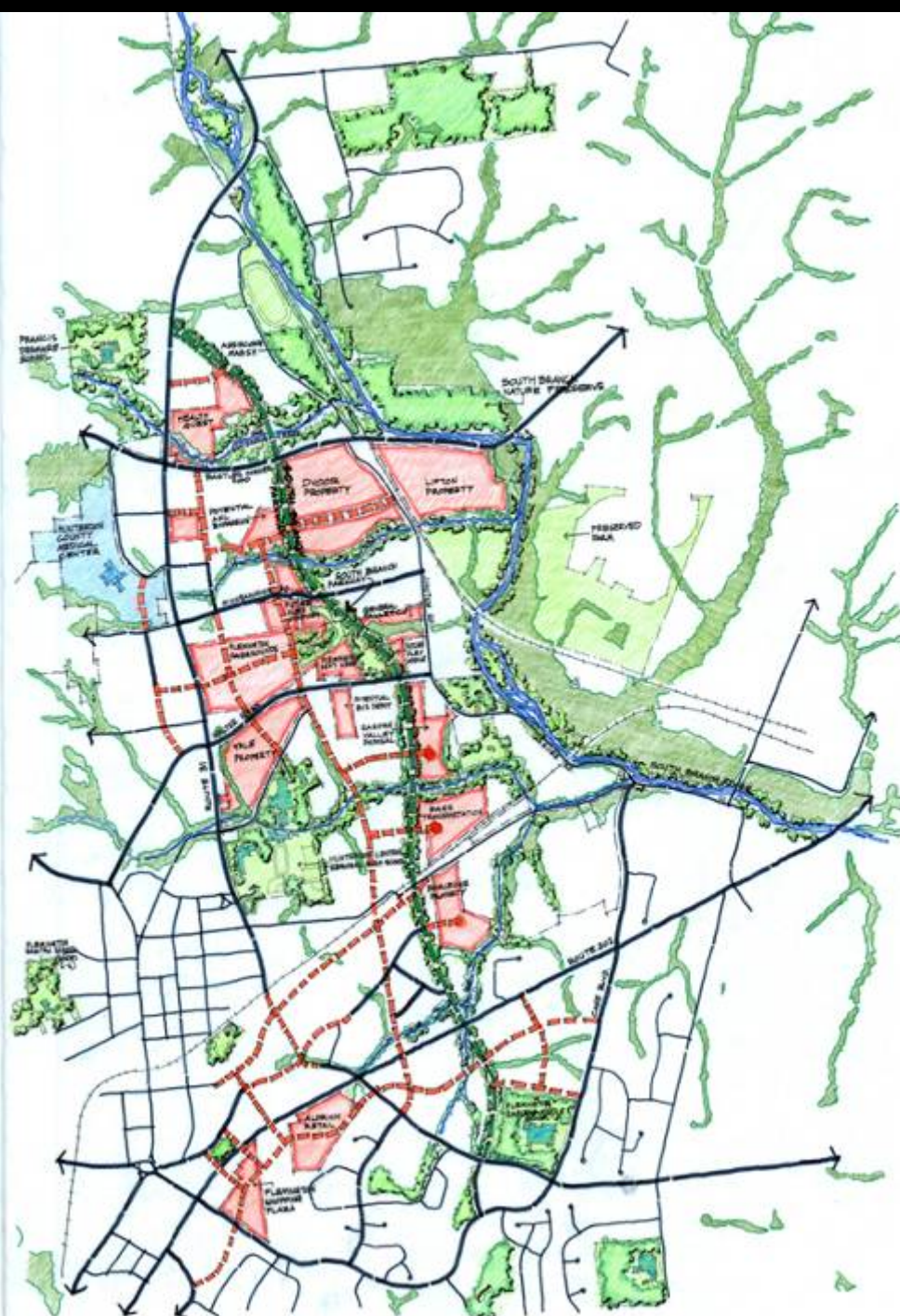
## Build Network Over Time

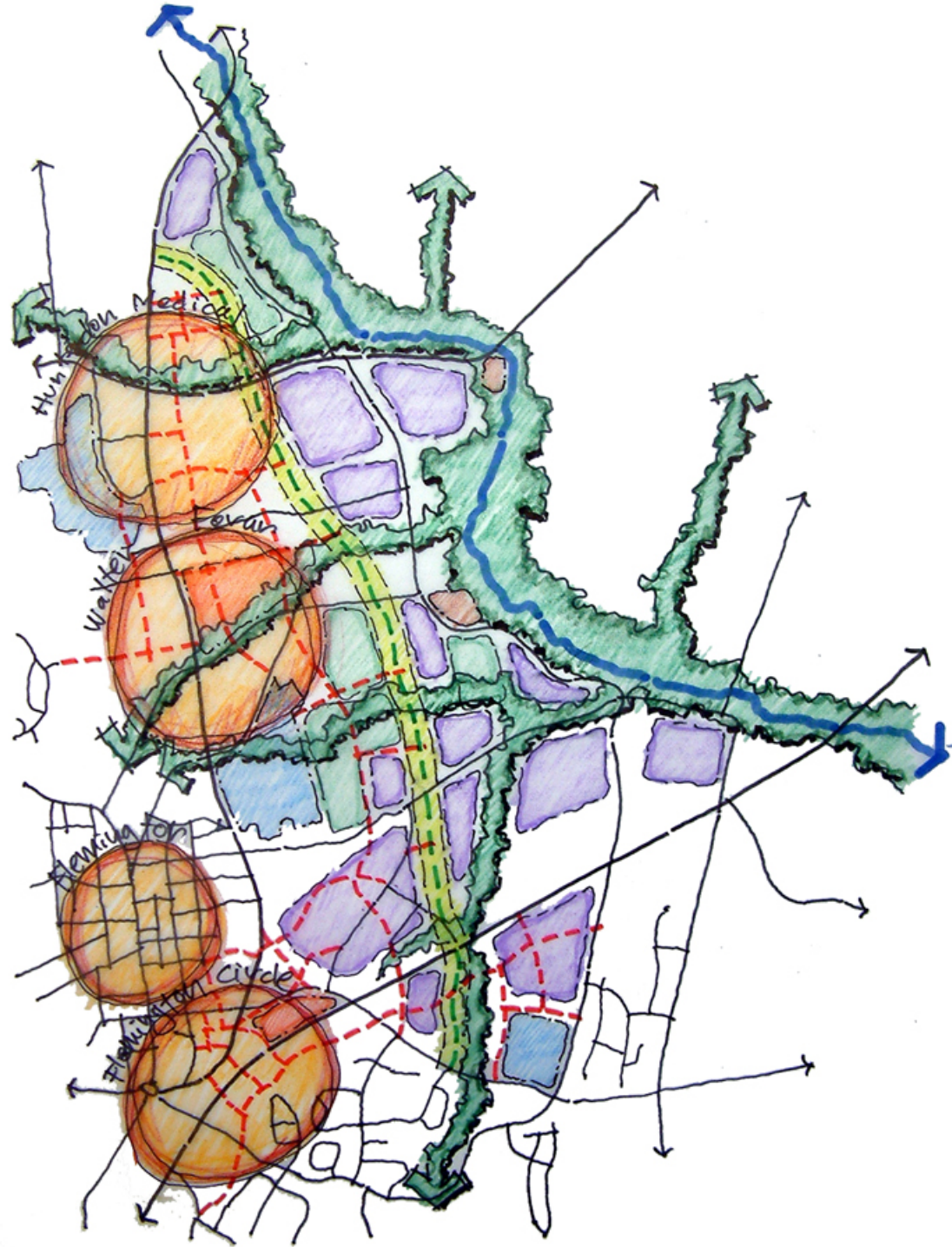


**Celebrate  
Cultural  
Resources**



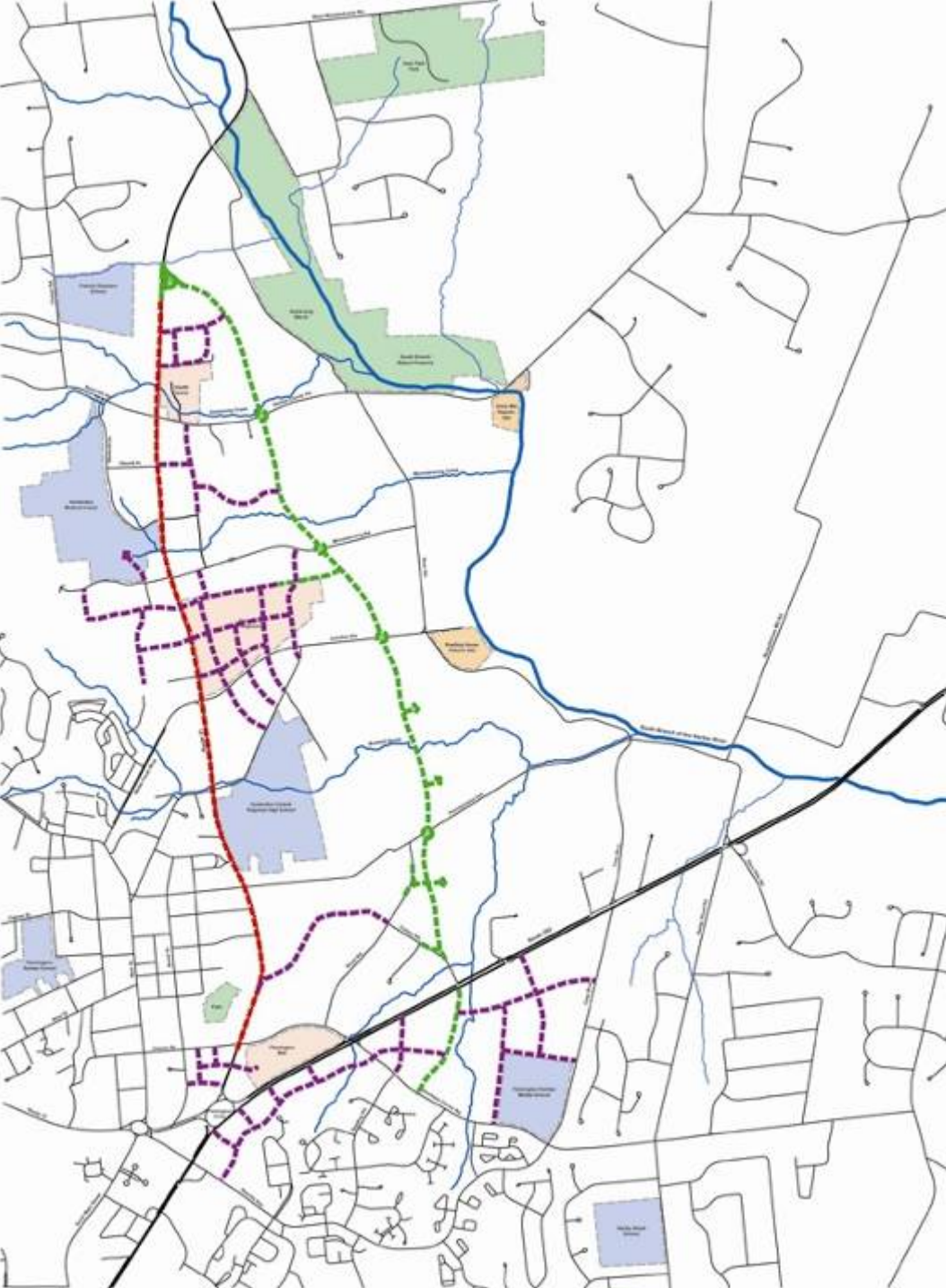








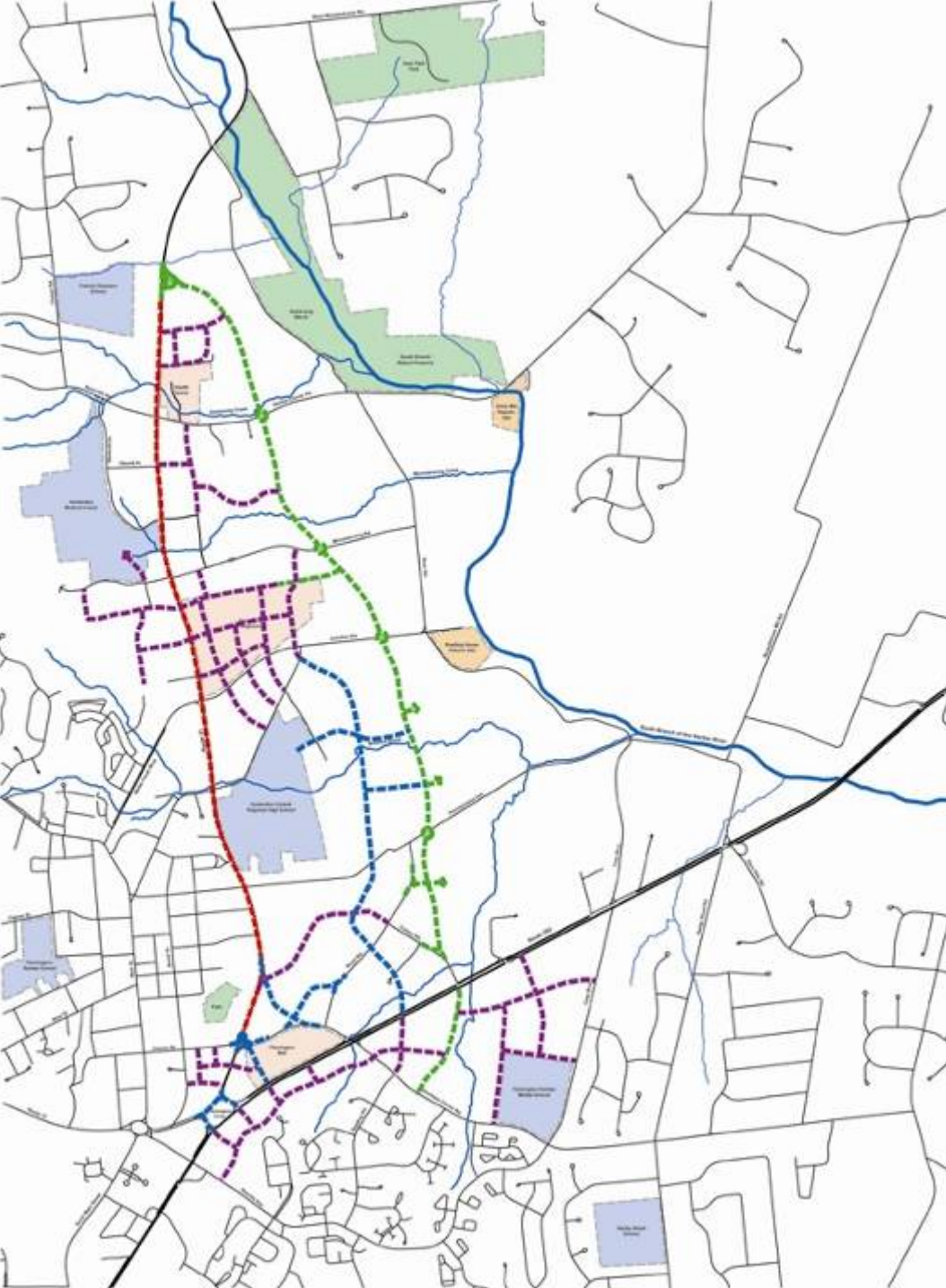




## Phasing: **Development Streets**

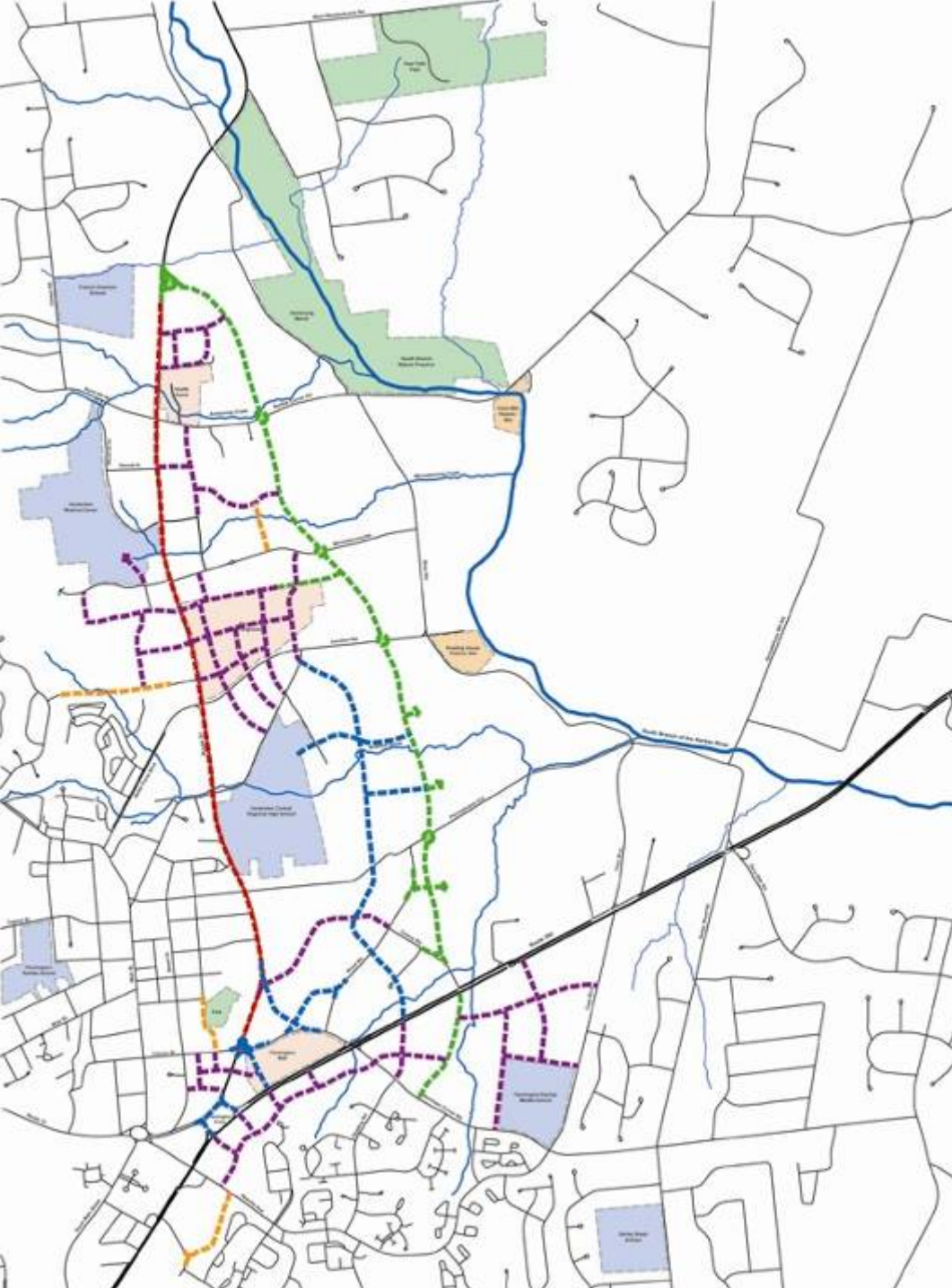
- Fairgrounds
- Rt. 202 commercial
- Other Future Development





## Phasing: “Circle to Square”

- Route 12 & Church St. realignment
- Circle to Square
- Additional parallel route to parkway



## Phasing: Other Secondary Connections

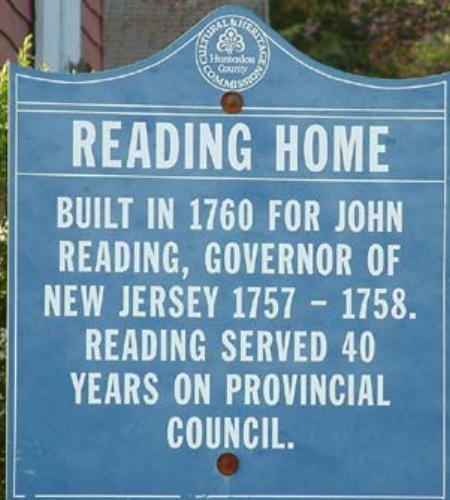


# **Understanding Context:** **Social & Qualitative**





# Historic Homesteads





## Historic Stone Arch Bridges





## The South Branch River





















