

# Nashville Area Metropolitan Planning Organization Tri-County Transportation & Land Use Study of Robertson, Sumner, Wilson Counties

Steering Committee Meeting  
November 20, 2009



LandDesign • Kimley-Horn & Associates, Inc.  
Basile Baumann Prost Cole & Associates, Inc. • Sterling Communications

# Agenda



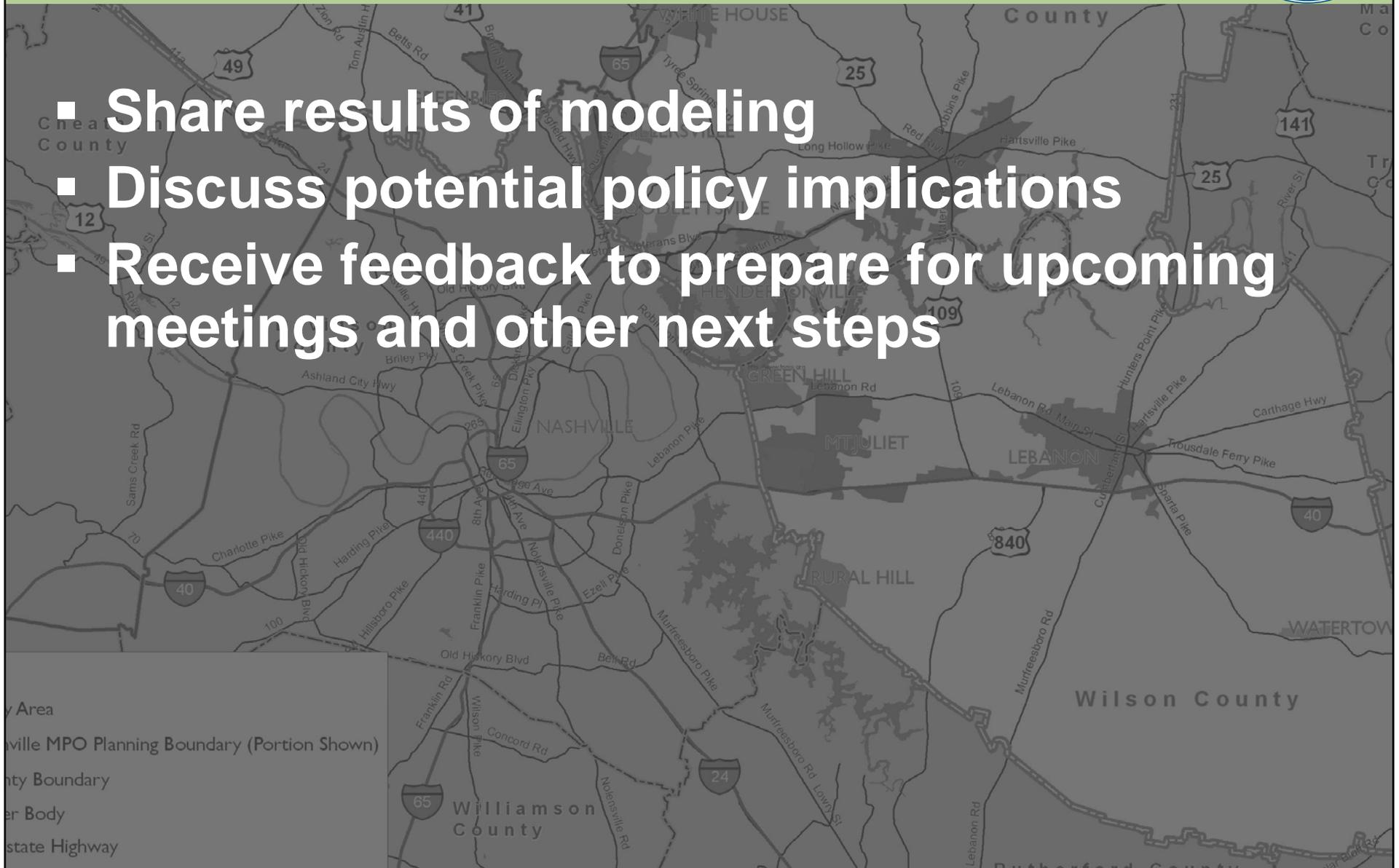
- **Update on Overall Progress**
- **Review Modeling Results**
  - Business as Usual (BAU) Growth Scenario
  - Alternative 1 Growth Scenario (Centers & Corridors)
  - Alternative 2 Growth Scenario (Centers)
- **Discuss Performance Measures (MOEs)**
- **Policy Implications**
- **Next Steps**
  - Preferred Growth Scenario
  - Focus Areas and Strategic Corridors
  - Upcoming Public Workshops (December)

y Area  
ville MPO Planning  
nty Boundary  
er Body  
state Highway

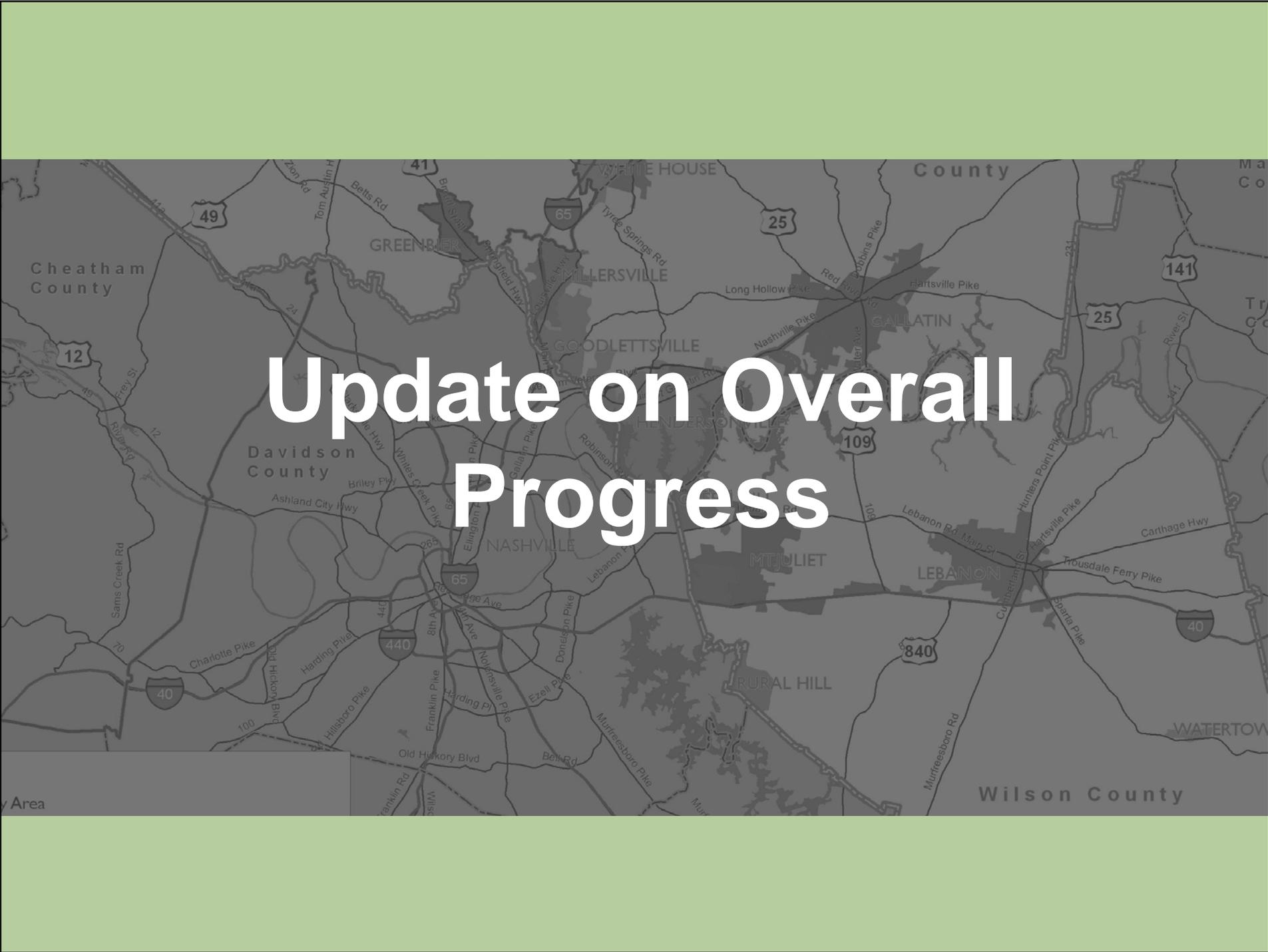
# Purpose of the Meeting



- Share results of modeling
- Discuss potential policy implications
- Receive feedback to prepare for upcoming meetings and other next steps



y Area  
Nashville MPO Planning Boundary (Portion Shown)  
County Boundary  
Water Body  
State Highway

A map of the Nashville, Tennessee area, showing major highways and city names. The map is overlaid with a large white text box. The text is centered and reads "Update on Overall Progress". The map shows the Nashville area, including Davidson County, Cheatham County, and Wilson County. Major highways like I-40, I-65, I-75, and US-41 are visible. City names like Nashville, Mt Juliet, Gallatin, and Lebanon are also present. The map is framed by a green header and footer.

# Update on Overall Progress



# Update on Overall Progress

**01**

TASK 1

Consultant Coordination Plan

**02**

TASK 2

Public Participation Plan

**03**

TASK 3

Economic and Market Information

**04**

TASK 4

Develop/Evaluate BAU Growth Scenario

**05**

TASK 5

Develop/Evaluate Alternative Growth Scenarios

**06**

TASK 6

Prepare Preferred Plan and Supporting Illustrations

**07**

TASK 7

Policy Recommendations & Implementation Strategies

**08**

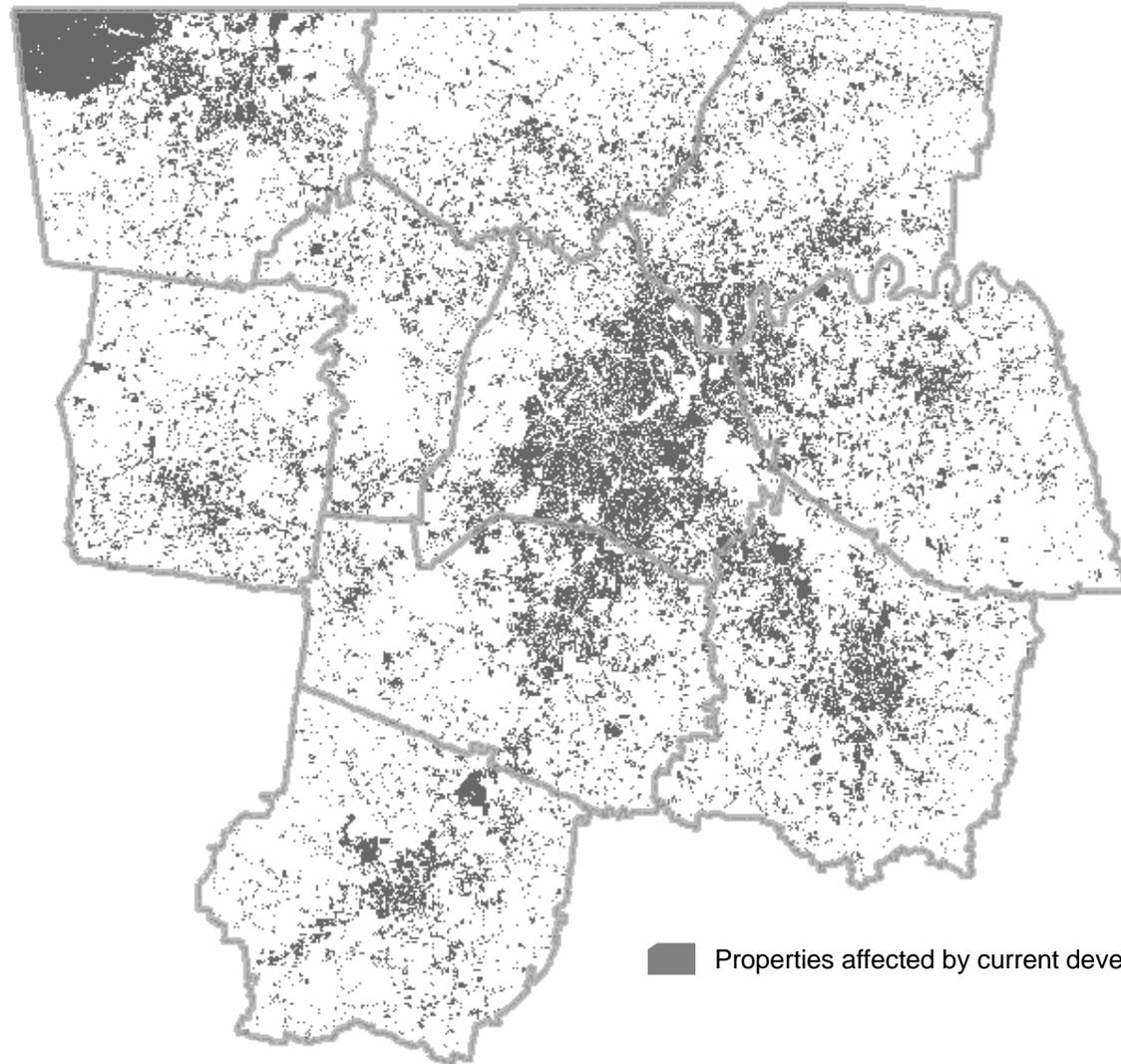
TASK 8

Final Report & Executive Summary

# Growth Scenarios

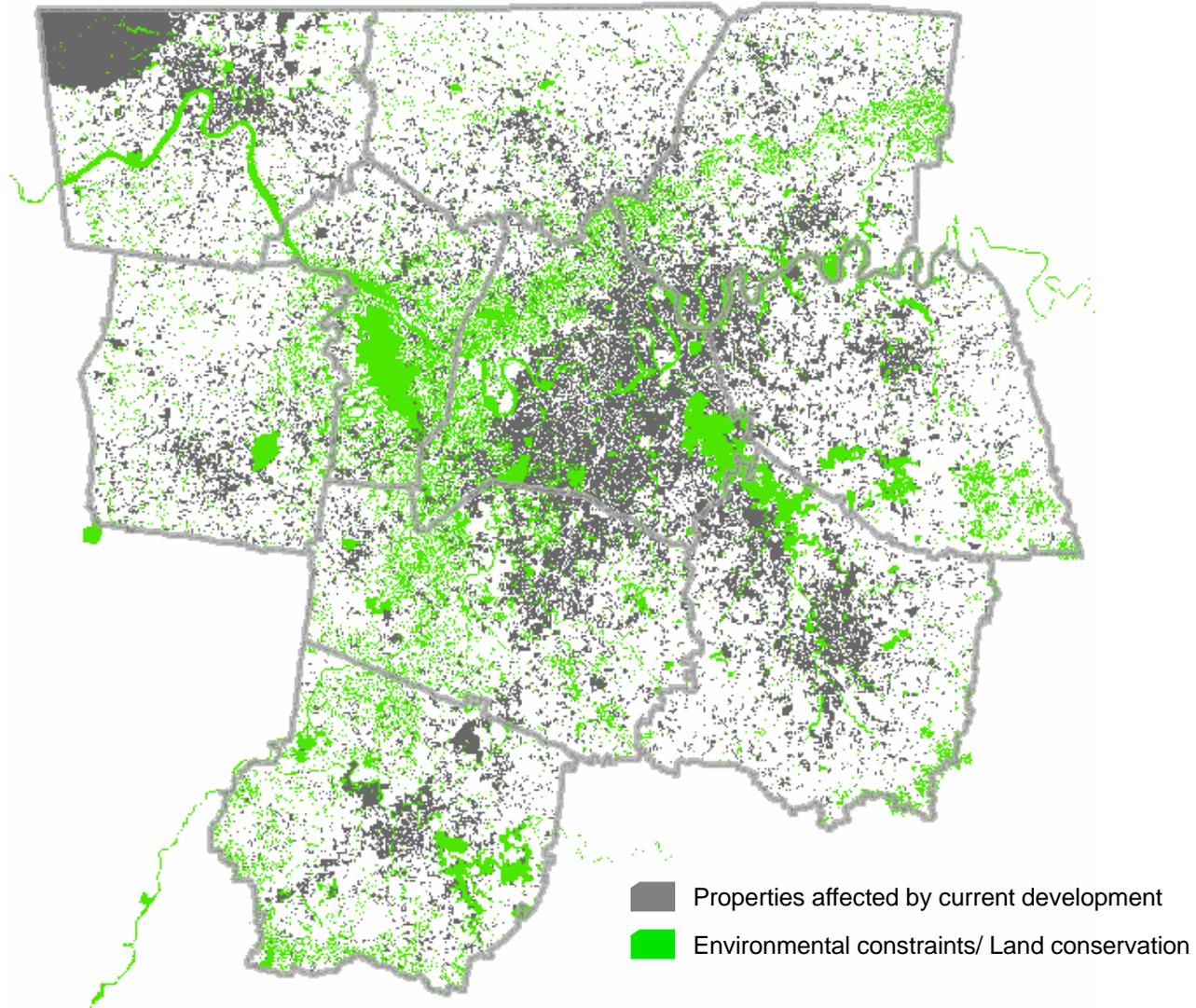


# Existing Development Pattern (2008)

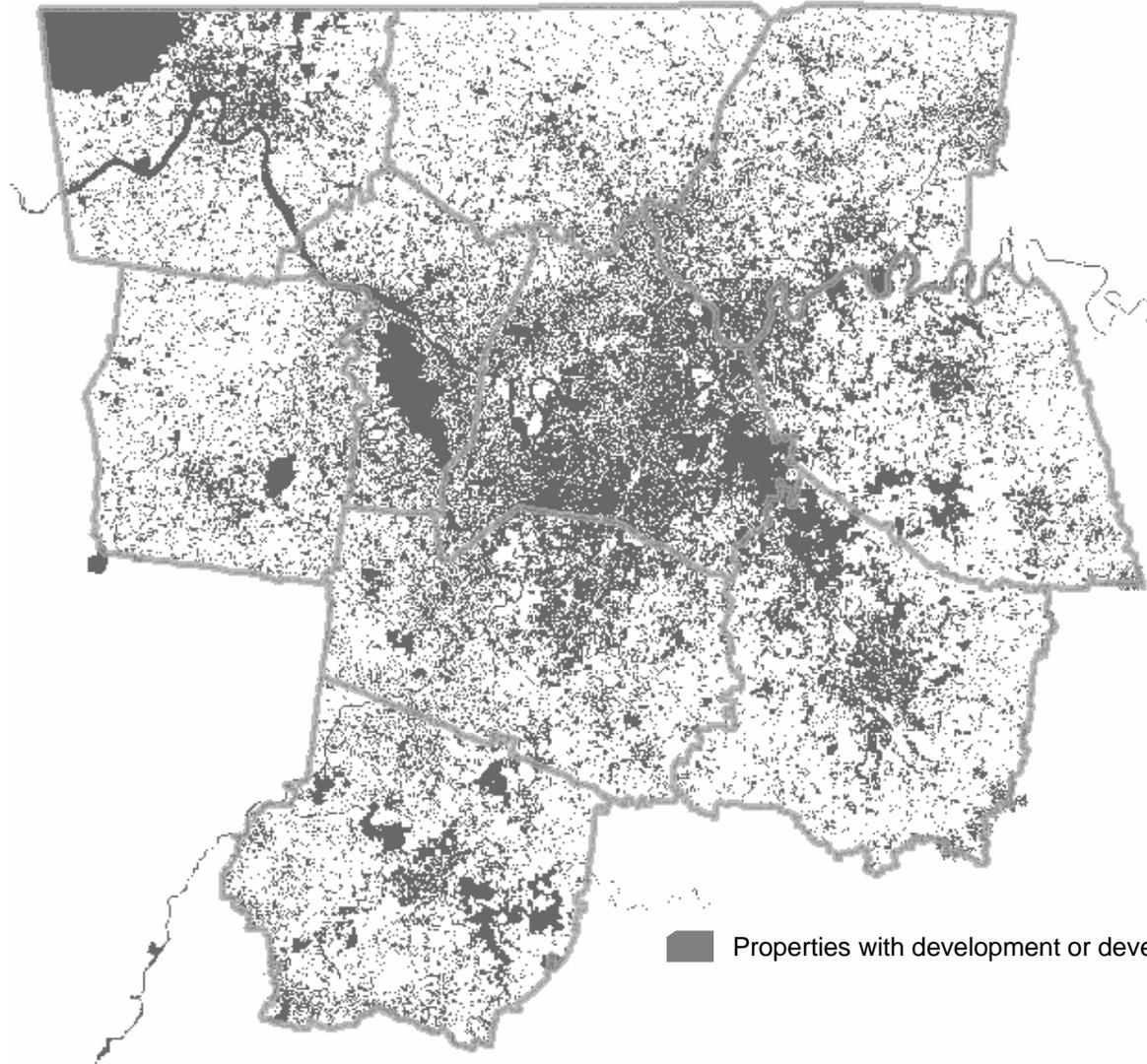


■ Properties affected by current development

# Environmental Constraints

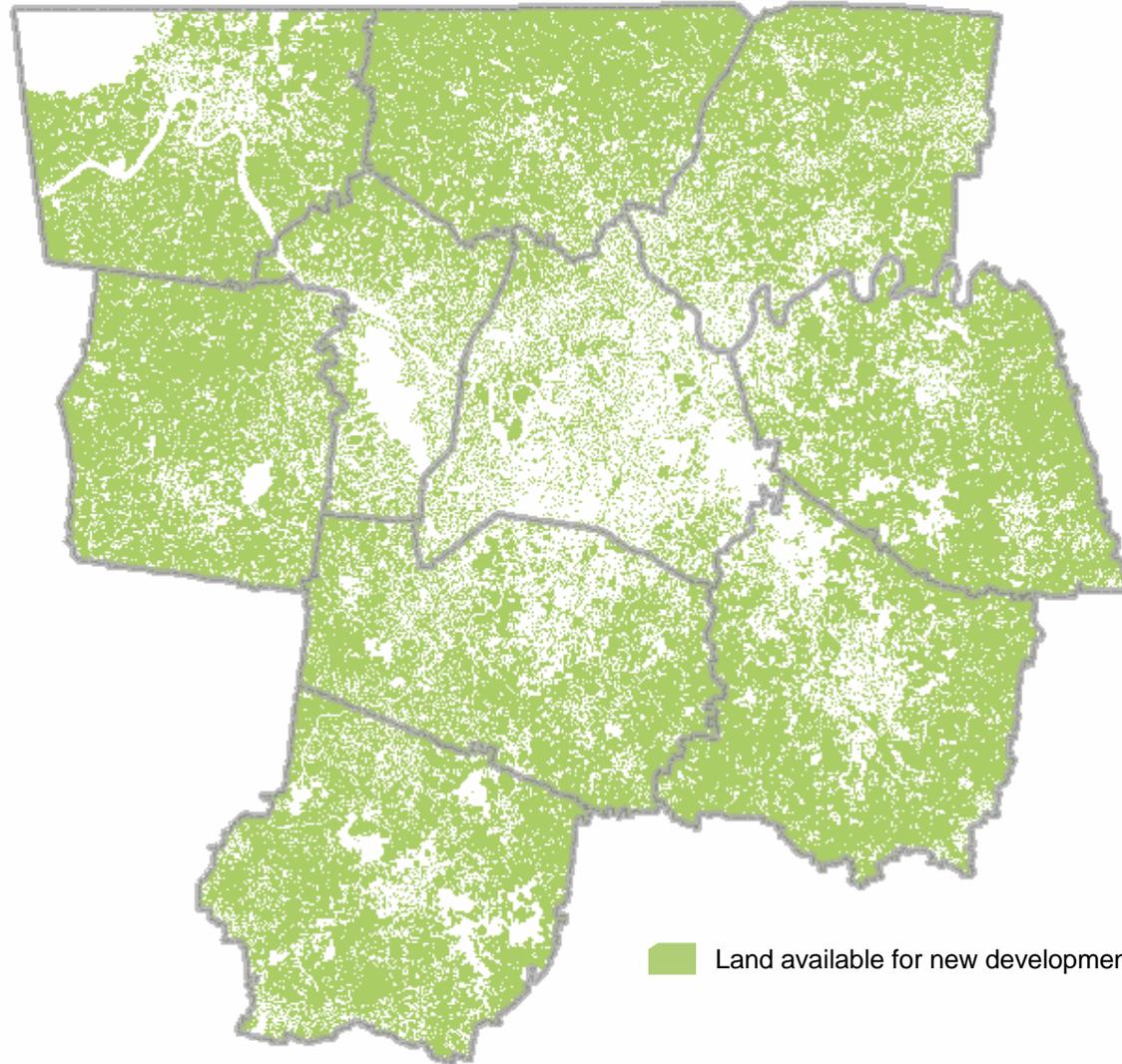


# Developed or Constrained



■ Properties with development or development constraints

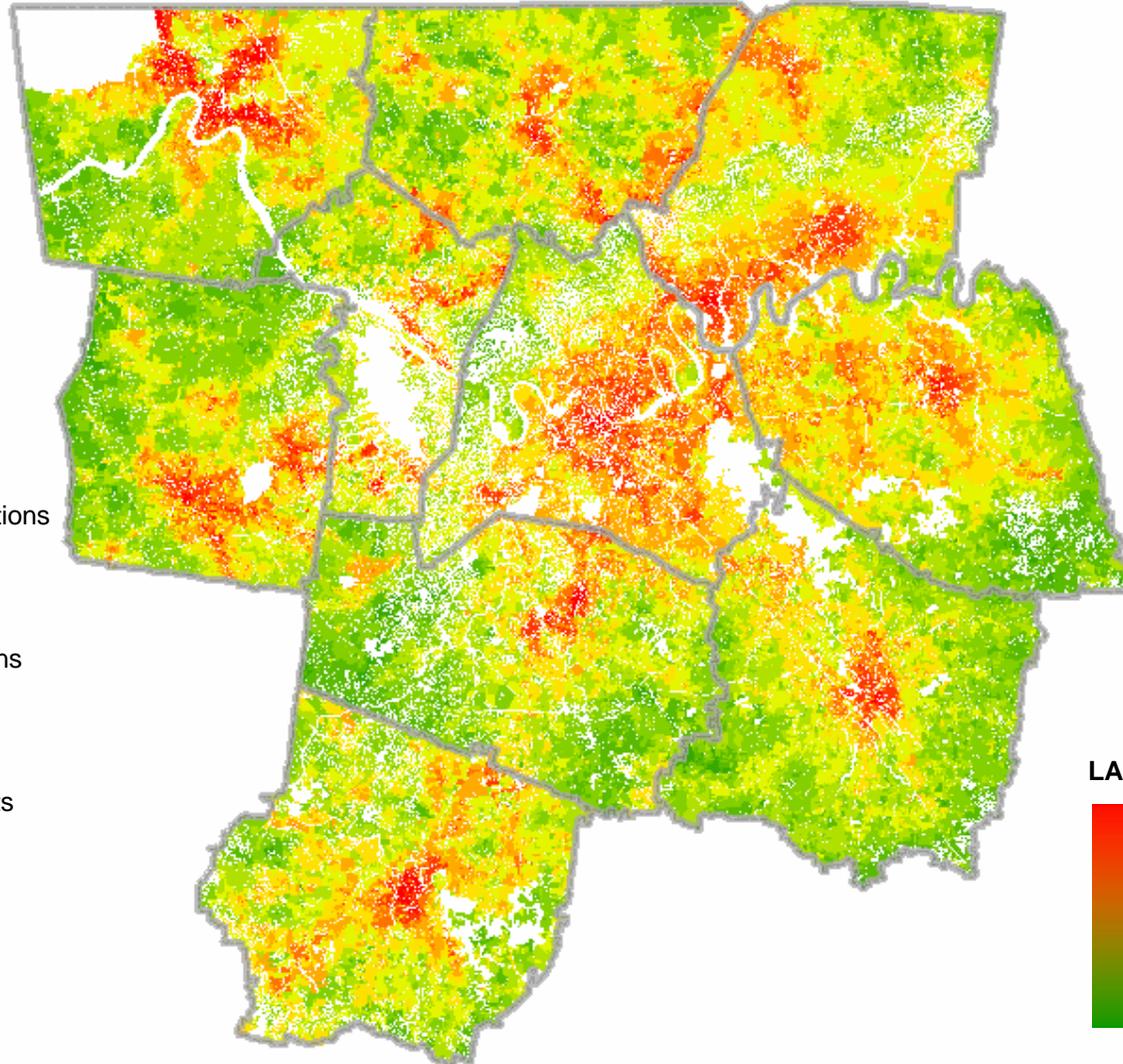
# Vacant Greenfield Development Opportunities



# Land Suitability – Attractiveness for Development

## Defining Suitability:

- Land Values
- Water/ Sewer
- Schools
- Major Roads/ Intersections
- Retail Opportunities
- Traffic Congestion
- Transit Service/ Stations
- Hospitals
- Parks & Recreation
- Environmental Conflicts



## LAND SUITABILITY



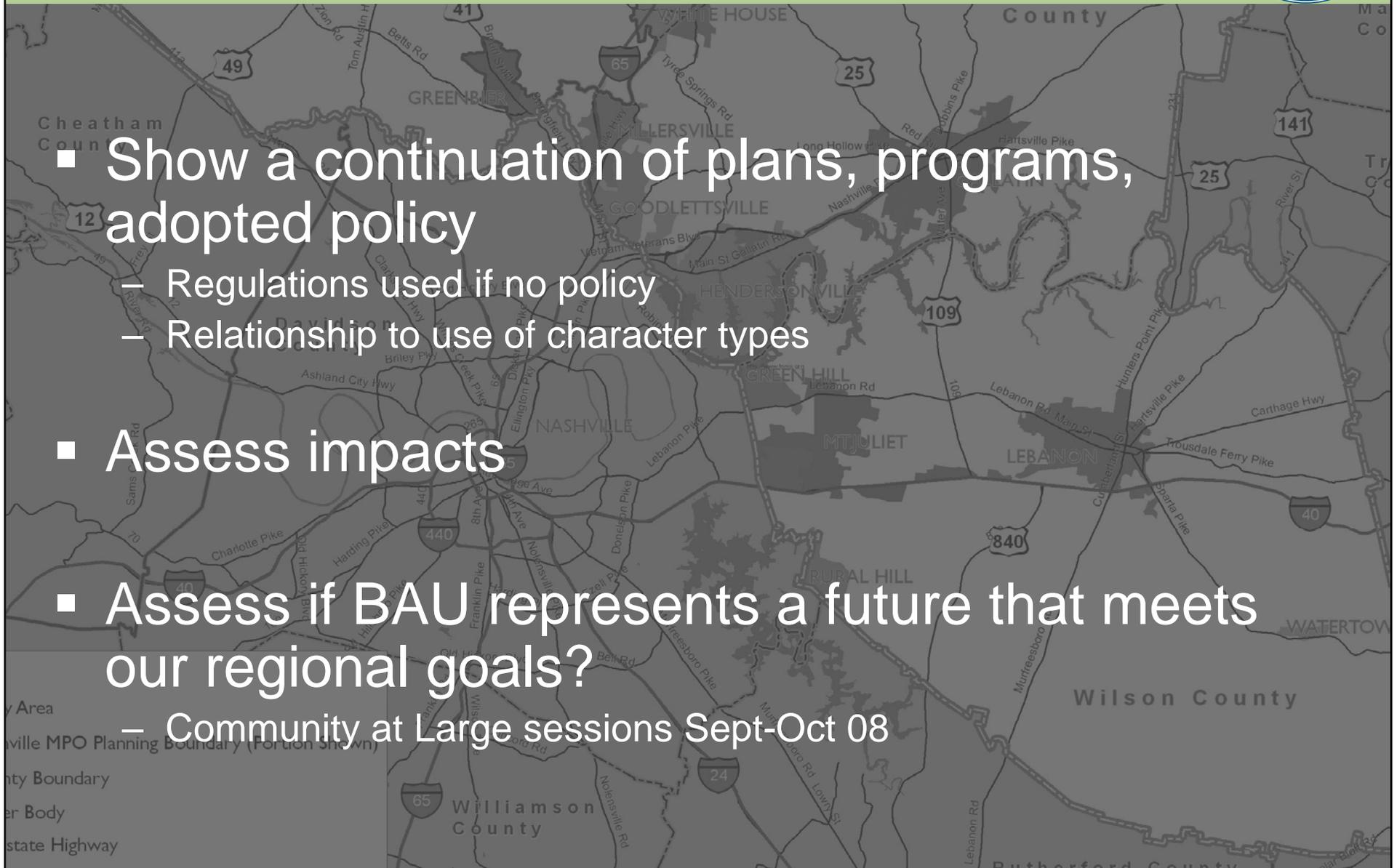
More Suitable

Less Suitable



# Purpose of BAU in Tri-County Study

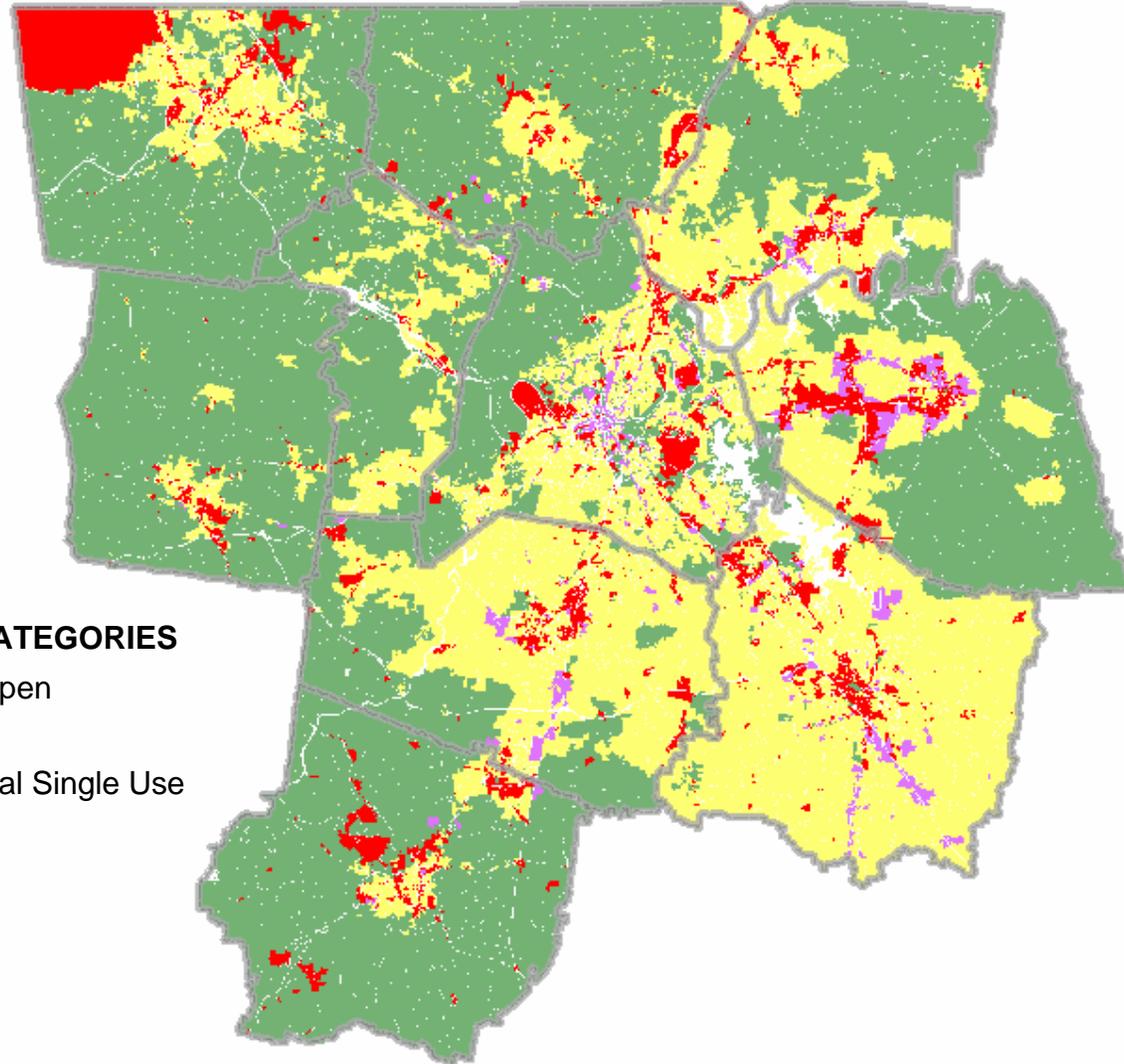
- Show a continuation of plans, programs, adopted policy
  - Regulations used if no policy
  - Relationship to use of character types
- Assess impacts
  - Assess if BAU represents a future that meets our regional goals?
    - Community at Large sessions Sept-Oct 08



# Generalized Land Use Policy

## GENERALIZED CATEGORIES

-  Agricultural, Open
-  Residential
-  Non-Residential Single Use
-  Mixed-Use



# Growth Policy

### General Urban

- Definition**
  - Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape
  - Areas generally within current city limits of county seats
  - Generally comprised of established residential neighborhoods found near historic core areas
- Local Examples**
  - Franklin
  - Gallatin
  - Marionboro
- Examples Elsewhere**
  - Savannah GA
  - Charleston SC
- Uses/Intensity**
  - Predominantly small lot and attached residential, multi-family
  - Medium to high density residential > 5 du/ac
  - Civic, parks and open space, limited retail and office uses
  - Non-residential FAR > 0.9
- Structure Heights**
  - 2-3 Stories
- Street Pattern (typical)**
  - Connected street network in grid pattern
  - On-street parking
  - 750 feet for smaller (2-lane) collectors and arterials
  - 3,000 - 4,000 feet for larger (4-lane) collectors and arterials
- Multi-modal Accommodations**
  - Typically sidewalks supplemented by multi-use trails
  - Bicycle accommodations
  - A moderate level of transit accommodations in larger cities with buses or trains running every 15 to 30 minutes. Smaller cities may have limited trolley or local circulator service with connections to an express bus or rail route to the central city
  - Access to carpool or vanpool park-in-side lots








LandDesign. CHARACTER TYPE - GENERAL URBAN  
Tri-County Transportation and Land Use Study, Tennessee

-  General Urban
-  Suburban
-  Rural
-  Urban Core
-  Traditional Town Center
-  Village Center
-  Activity Center
-  Employment/ Industrial Center

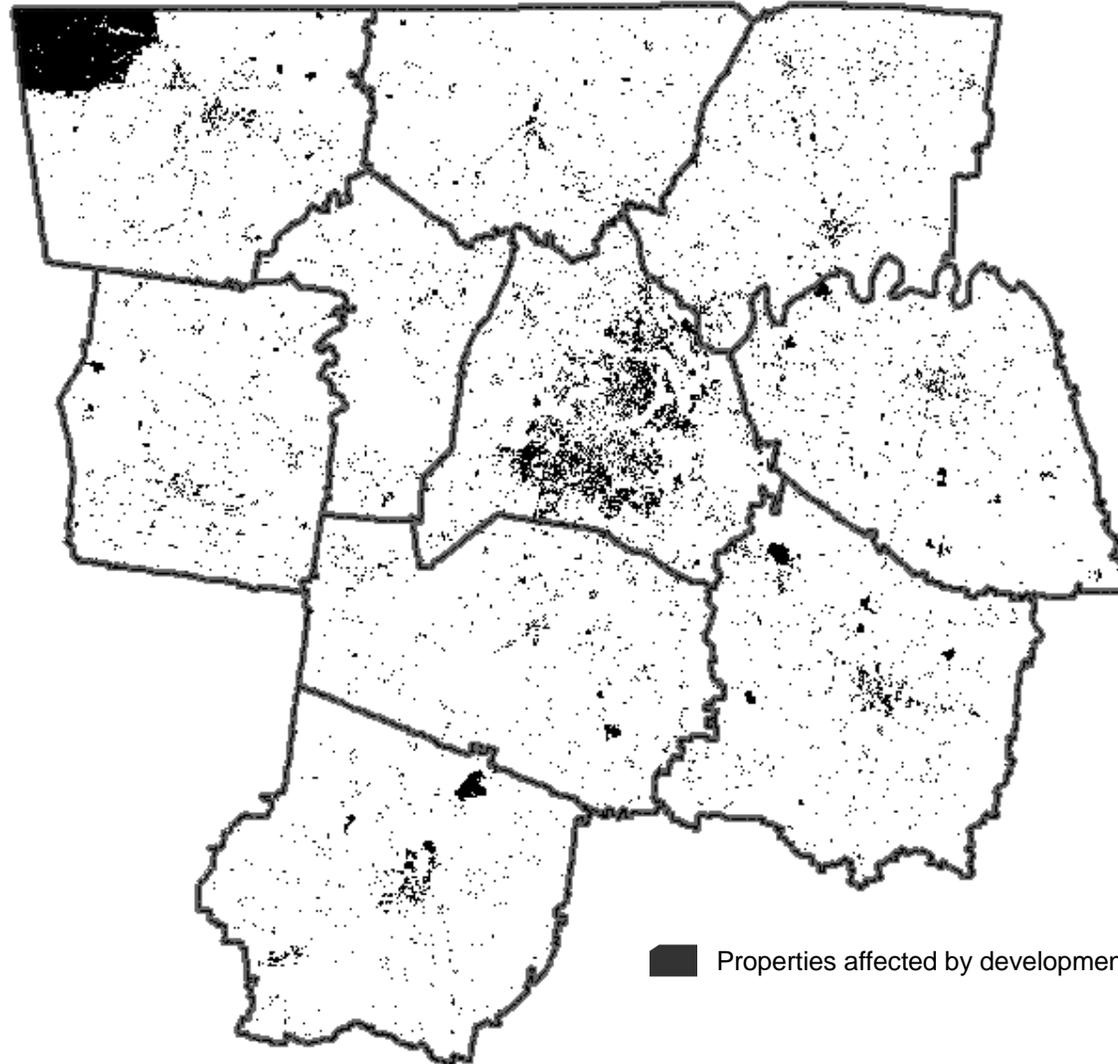
### SUMMARY OF CHARACTER TYPES

Tri-County Transportation and Land Use Study, Tennessee

Character Type	Description	Structure Height	Typical Density (du/ac)	Typical Structure	Typical Street Type	Typical Block Size (ft)	Typical Lot Size (sq ft)	Typical Building Footprint (sq ft)	Typical Floor Area Ratio (FAR)	Typical Parking Ratio	Typical Land Use	Typical Intensity
General Urban	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	2-3 Stories	5-15 du/ac	Multi-family, small lot residential, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	0.9-2.0	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac
Suburban	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	1-2 Stories	2-5 du/ac	Single-family detached, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	0.5-1.0	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac
Rural	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	1-2 Stories	1-2 du/ac	Single-family detached, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	0.2-0.5	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac
Urban Core	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	3-4 Stories	10-20 du/ac	Multi-family, small lot residential, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	2.0-4.0	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac
Traditional Town Center	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	3-4 Stories	10-20 du/ac	Multi-family, small lot residential, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	2.0-4.0	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac
Village Center	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	2-3 Stories	5-10 du/ac	Multi-family, small lot residential, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	1.0-2.0	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac
Activity Center	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	3-4 Stories	10-20 du/ac	Multi-family, small lot residential, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	2.0-4.0	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac
Employment/ Industrial Center	Areas where a variety of land uses occur at medium to high densities, having a well-connected pattern within the landscape	3-4 Stories	10-20 du/ac	Multi-family, small lot residential, multi-family	Grid pattern	100-200 ft	10,000-20,000 sq ft	10,000-20,000 sq ft	2.0-4.0	1.0-1.5	Residential, civic, parks, open space, limited retail and office uses	Medium to high density residential > 5 du/ac

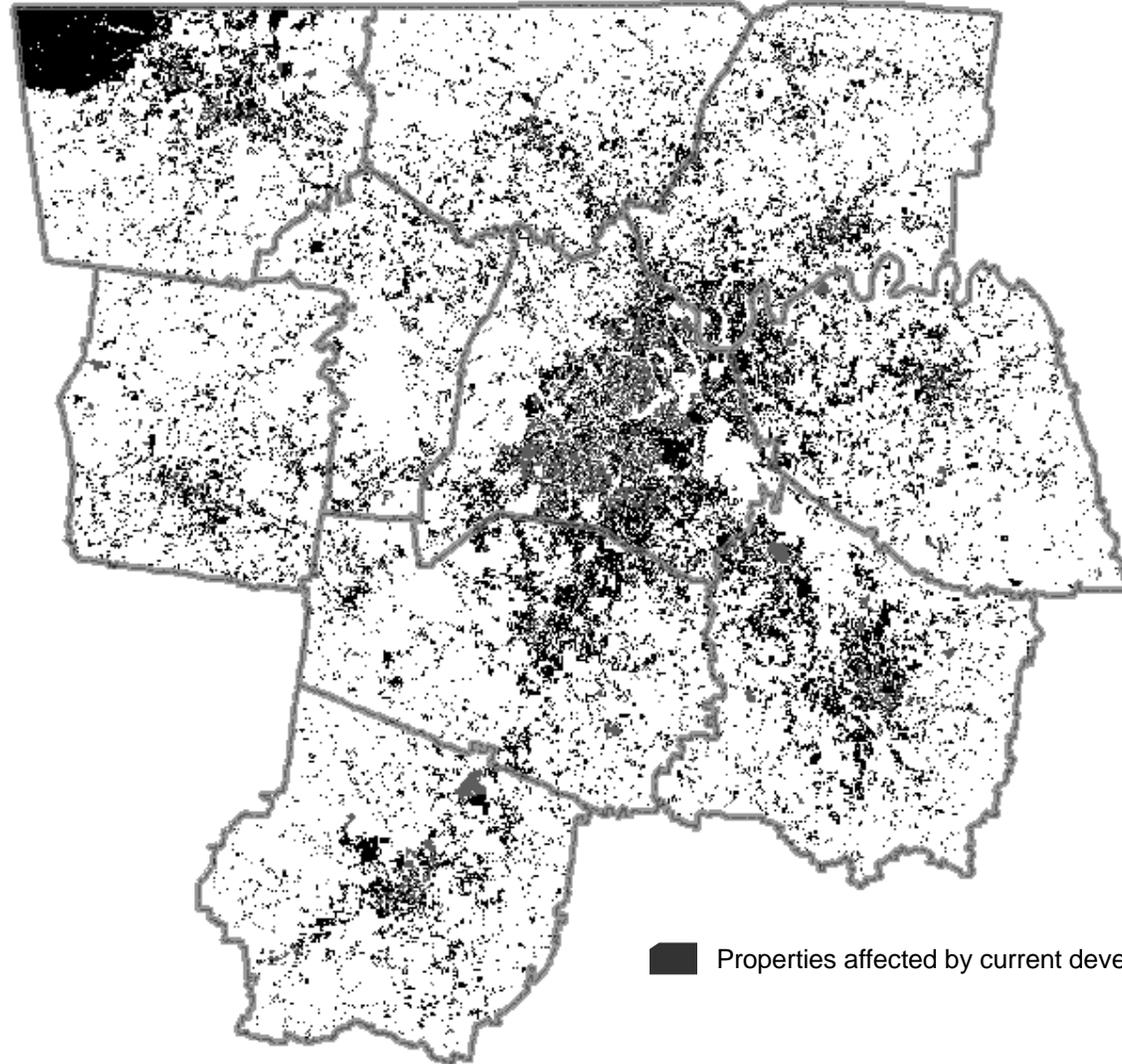
LandDesign. SUMMARY OF CHARACTER TYPES  
Tri-County Transportation and Land Use Study, Tennessee

# 1965 Development Pattern



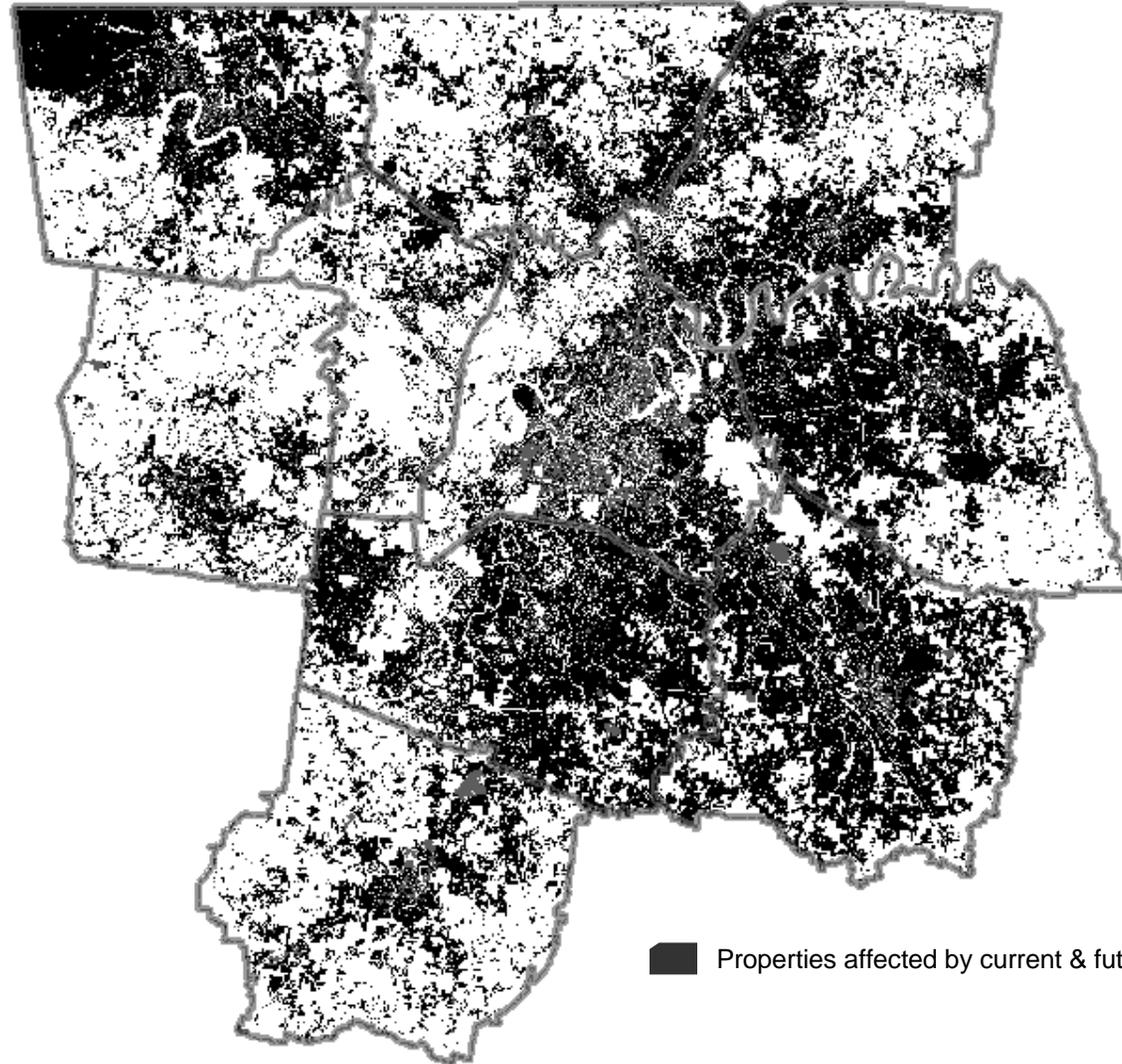
■ Properties affected by development in 1965

# 2008 Development Pattern



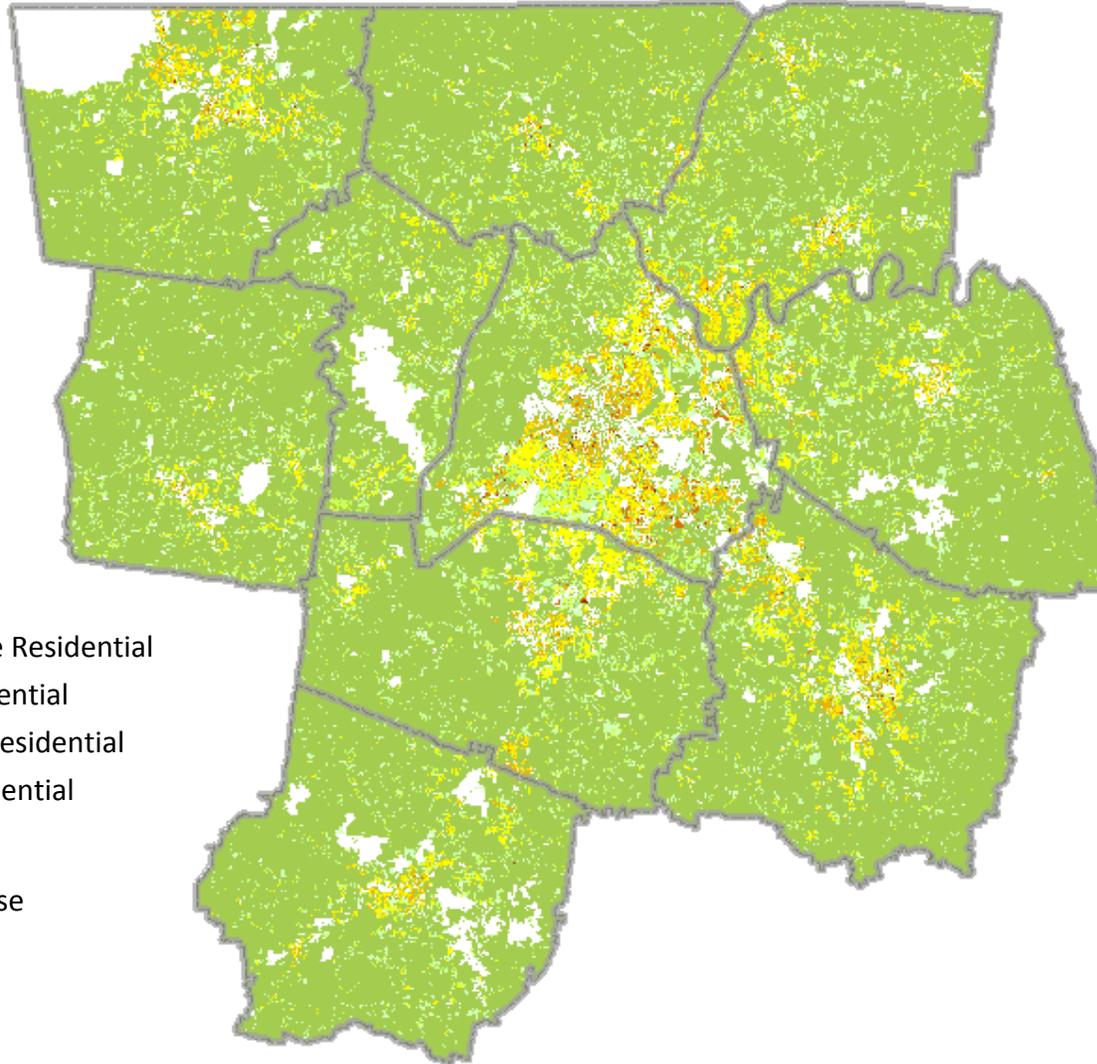
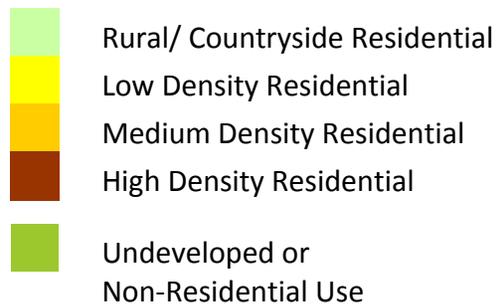
■ Properties affected by current development

# 2035 BAU Development Pattern

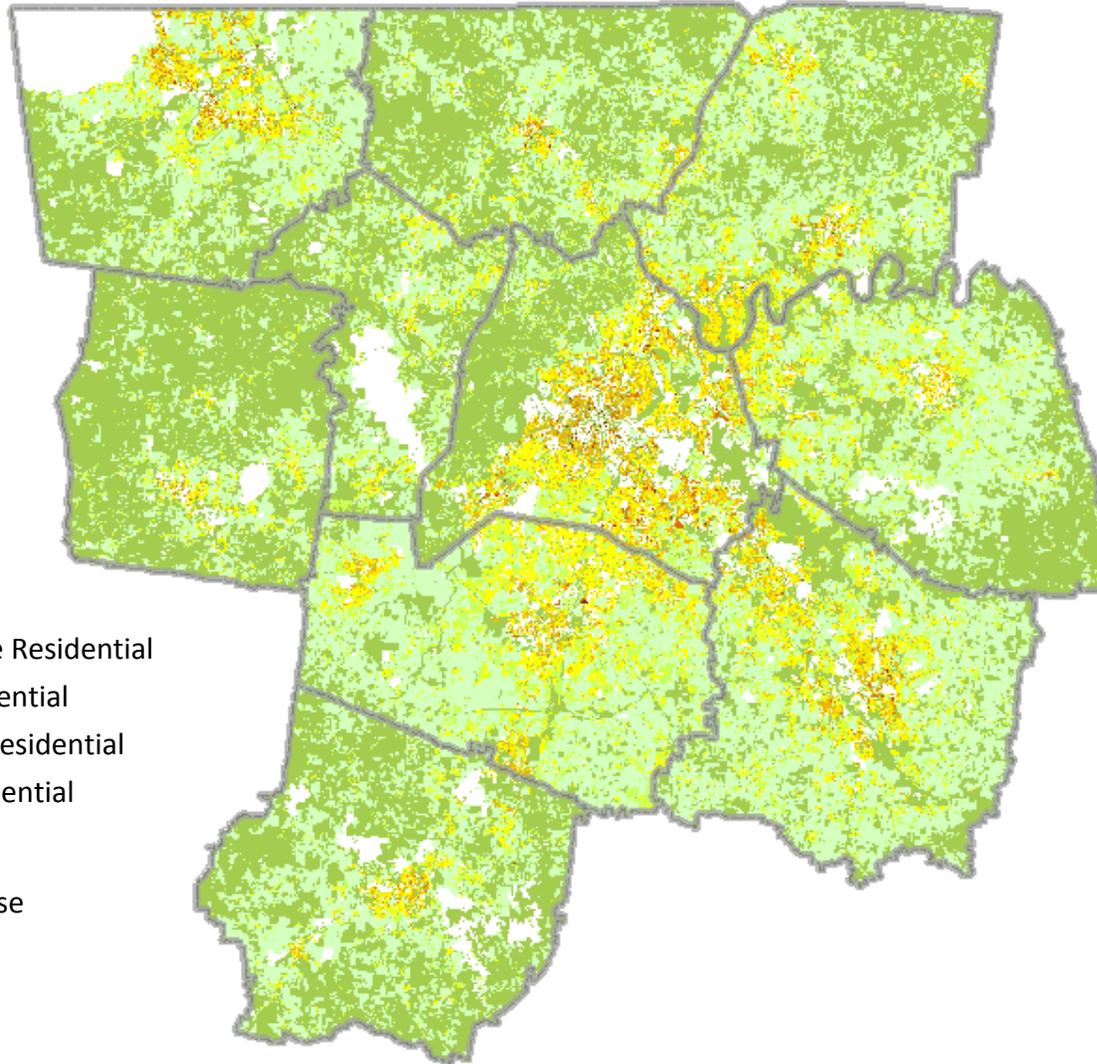
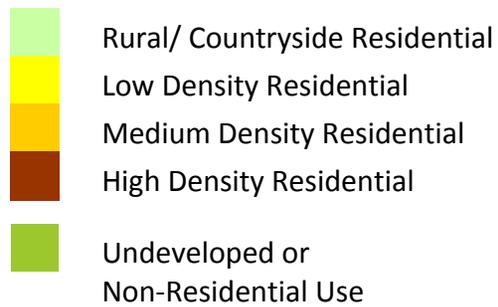


■ Properties affected by current & future development

# 2008 Residential Density



# 2035 BAU Residential Density





# Pros vs Cons: BAU

## ■ Pros

- future growth planned within defined urban growth boundaries
- cities and towns have plans to enhance urban centers
- established sense of community and place

## ■ Cons

- utility policies allow an undesirable pattern of growth outside cities and towns, leads to higher costs for infrastructure and services
- “bedroom” communities with limited housing choices, lack balanced tax base
- lack of overall vision for protecting agriculture, open space, environmental assets
- low density, dispersed growth limits potential for viable transportation options





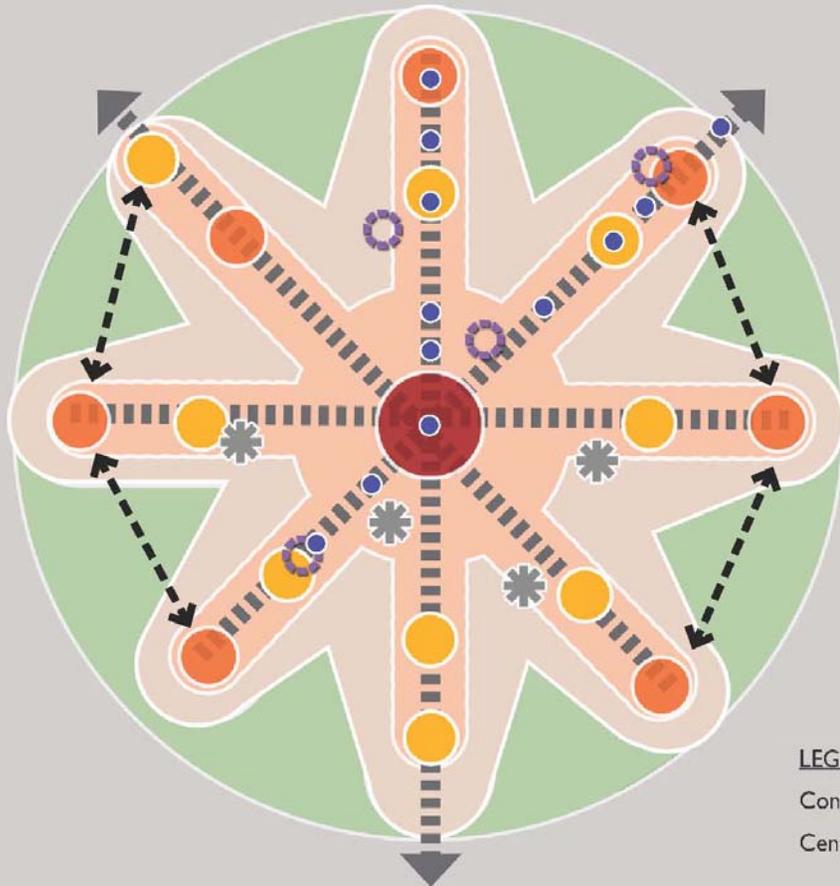
# Alternative Scenario Concepts

- Four alternative scenario “themes”
  - Conservation
  - Compact Development
  - Centers & Corridors
  - Centers
- Selected Centers & Corridors (1) and Centers (2)



# Centers and Corridors

centers and corridors



- Growth concentrated into regional, urban and outlying village centers with remnant countryside areas forming greenbelts surrounding centers



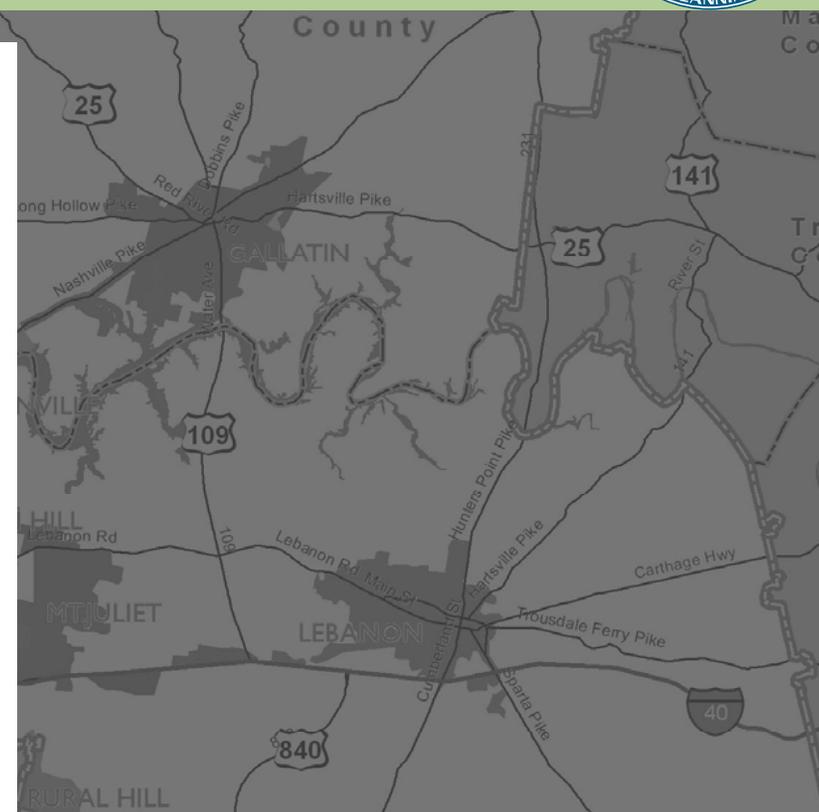
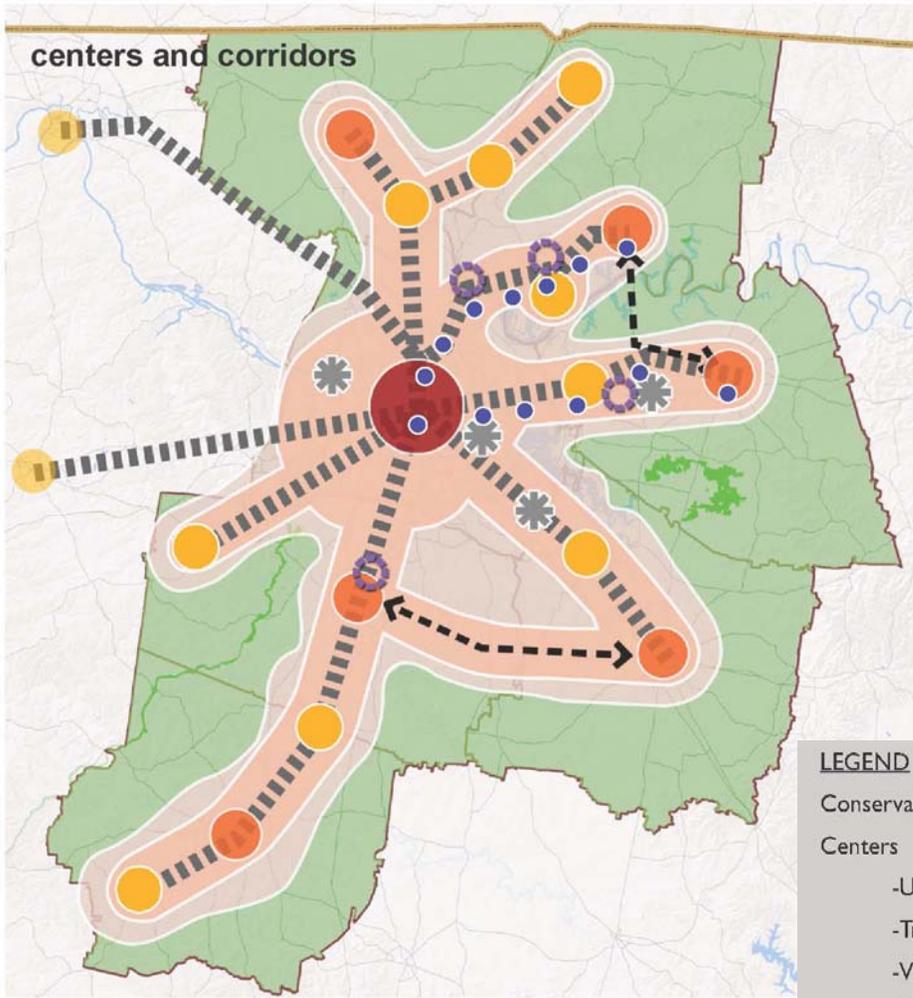
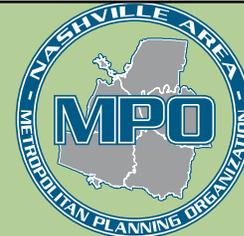
**LEGEND**

Conservation / Rural		Corridors	
Centers		-General Urban	
-Urban Core		-Suburban	
-Traditional Town Centers		Special Use	
-Village Centers		Special Activity Centers	
-TOD		Primary Linkages	
		Secondary Linkages	

County Boundary  
 er Body  
 state Highway



# Centers and Corridors



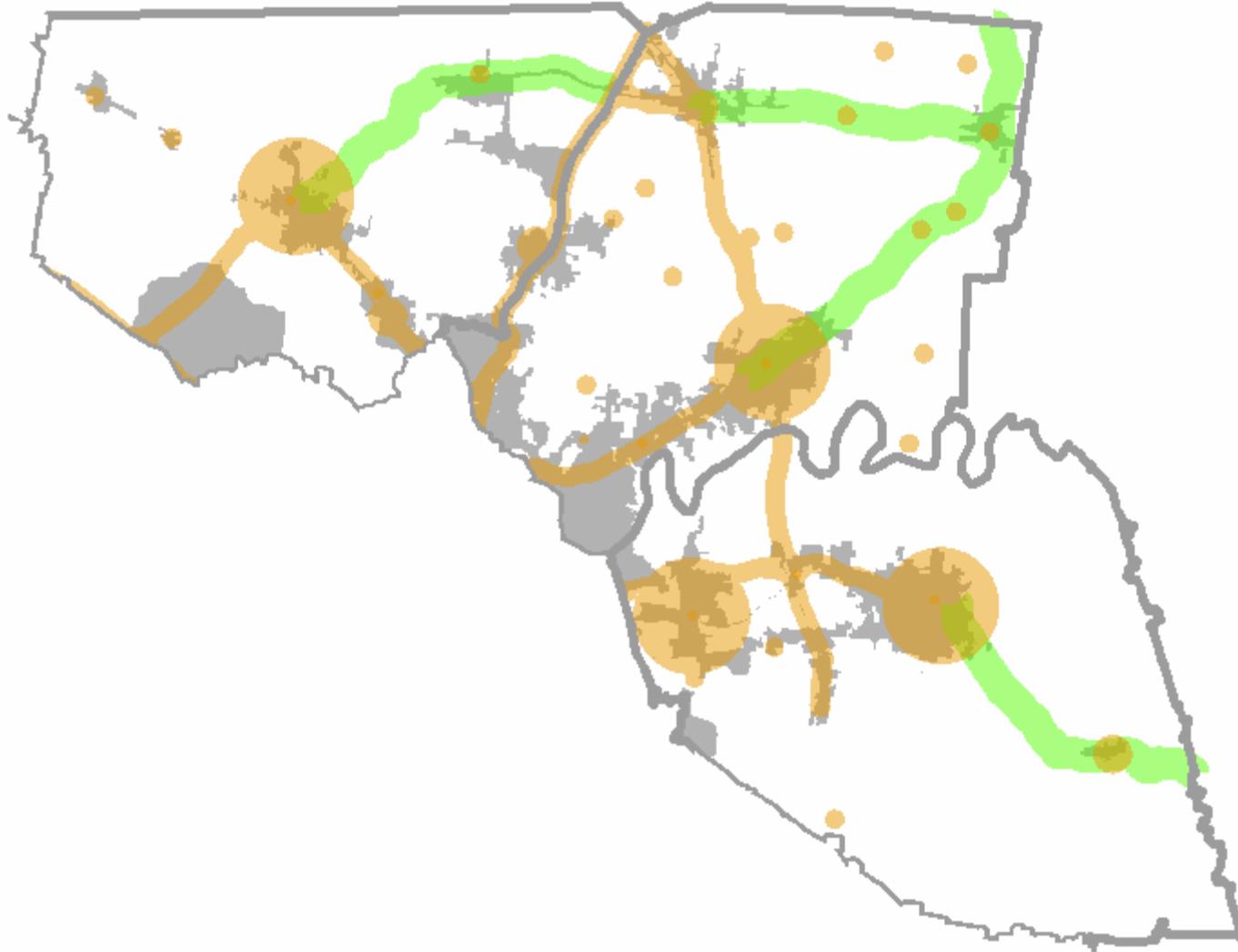
LEGEND	
Conservation / Rural	
Centers	
-Urban Core	
-Traditional Town Centers	
-Village Centers	
-TOD	
Corridors	
-General Urban	
-Suburban	
Special Use	
Special Activity Centers	
Primary Linkages	
Secondary Linkages	

er Body  
state Highway

65 Williamson County  
Lebanon Rd

Rutherford County

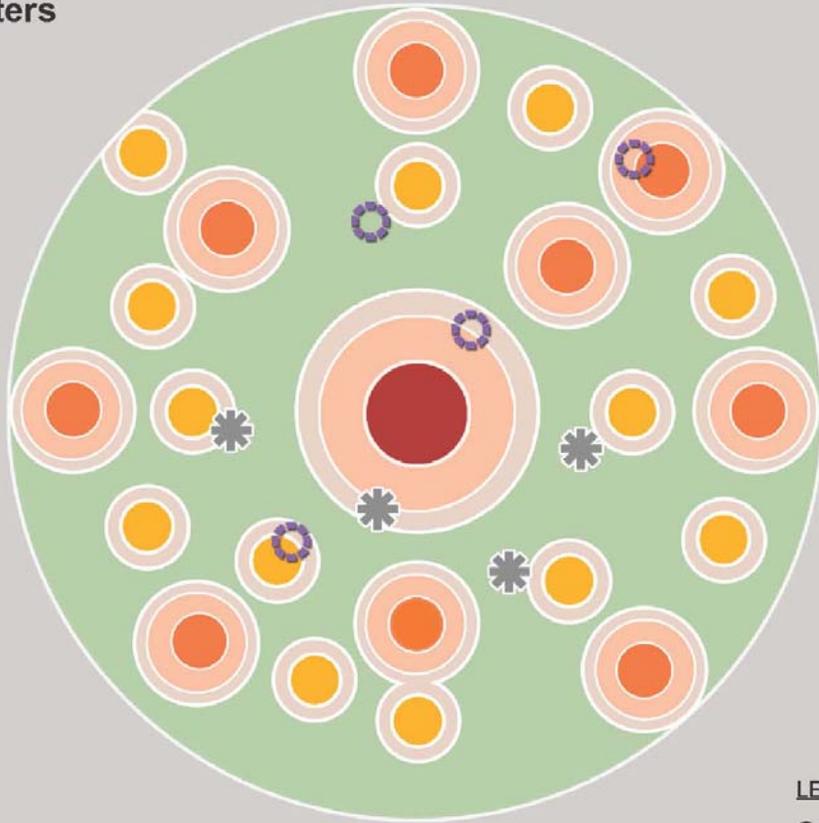
# (1) Centers & Corridors: Preferred Growth Areas



# Centers



centers



- Growth concentrated into regional, urban and outlying village centers with remnant countryside areas forming greenbelts surrounding centers



**LEGEND**

Conservation / Rural		Future Centers	
Centers		-Traditional Town Centers	
-Urban Core		-Village Centers	
-Traditional Town Centers		Future General Urban	
-Village Centers		Future Suburban	
General Urban		Special Use	
Suburban		Special Activity Centers	

ville MPO Planning Boundary (Portion Shown)

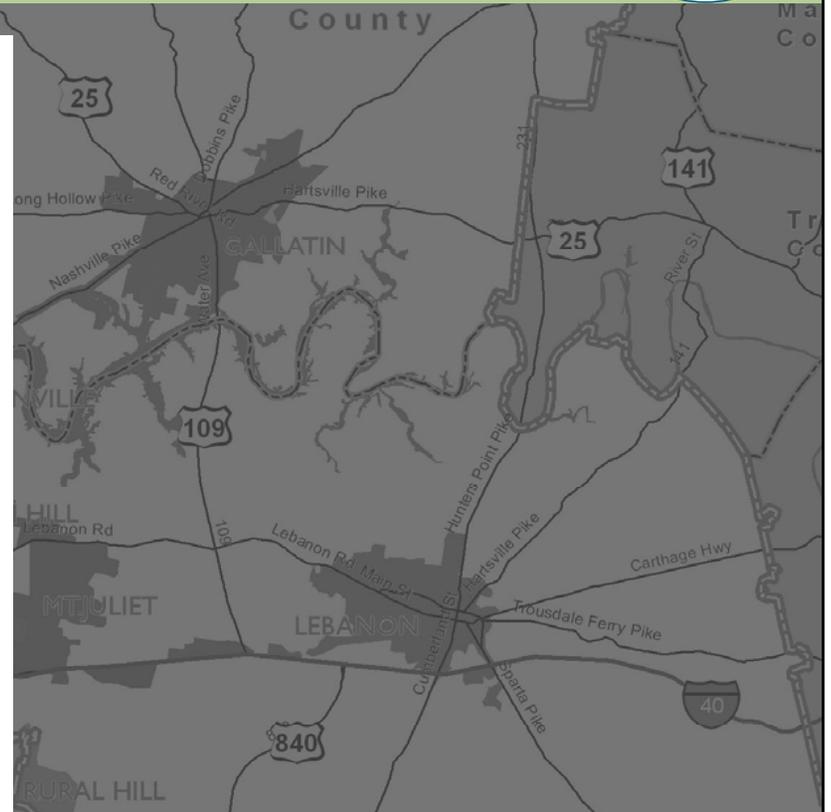
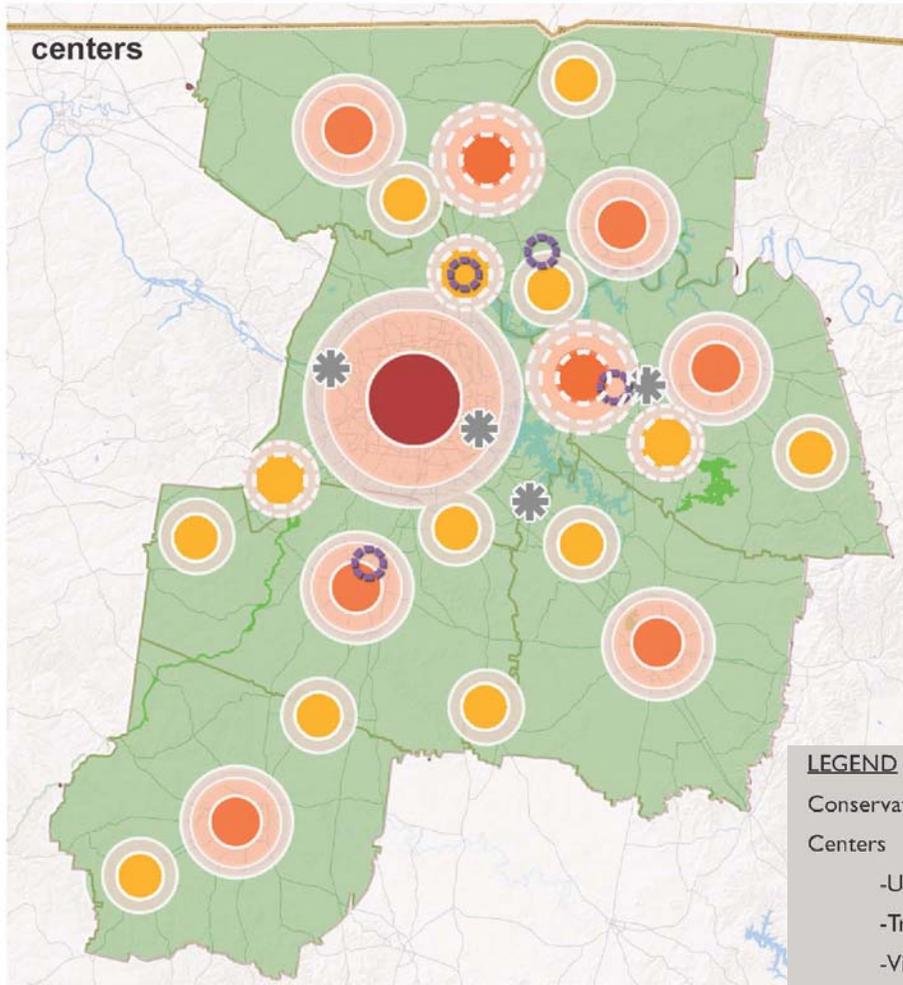
nty Boundary

er Body

state Highway



# Centers



## LEGEND

Conservation / Rural



Centers



-Urban Core

-Traditional Town Centers



-Village Centers



General Urban



Suburban



Future Centers

-Traditional Town Centers



-Village Centers



Future General Urban



Future Suburban



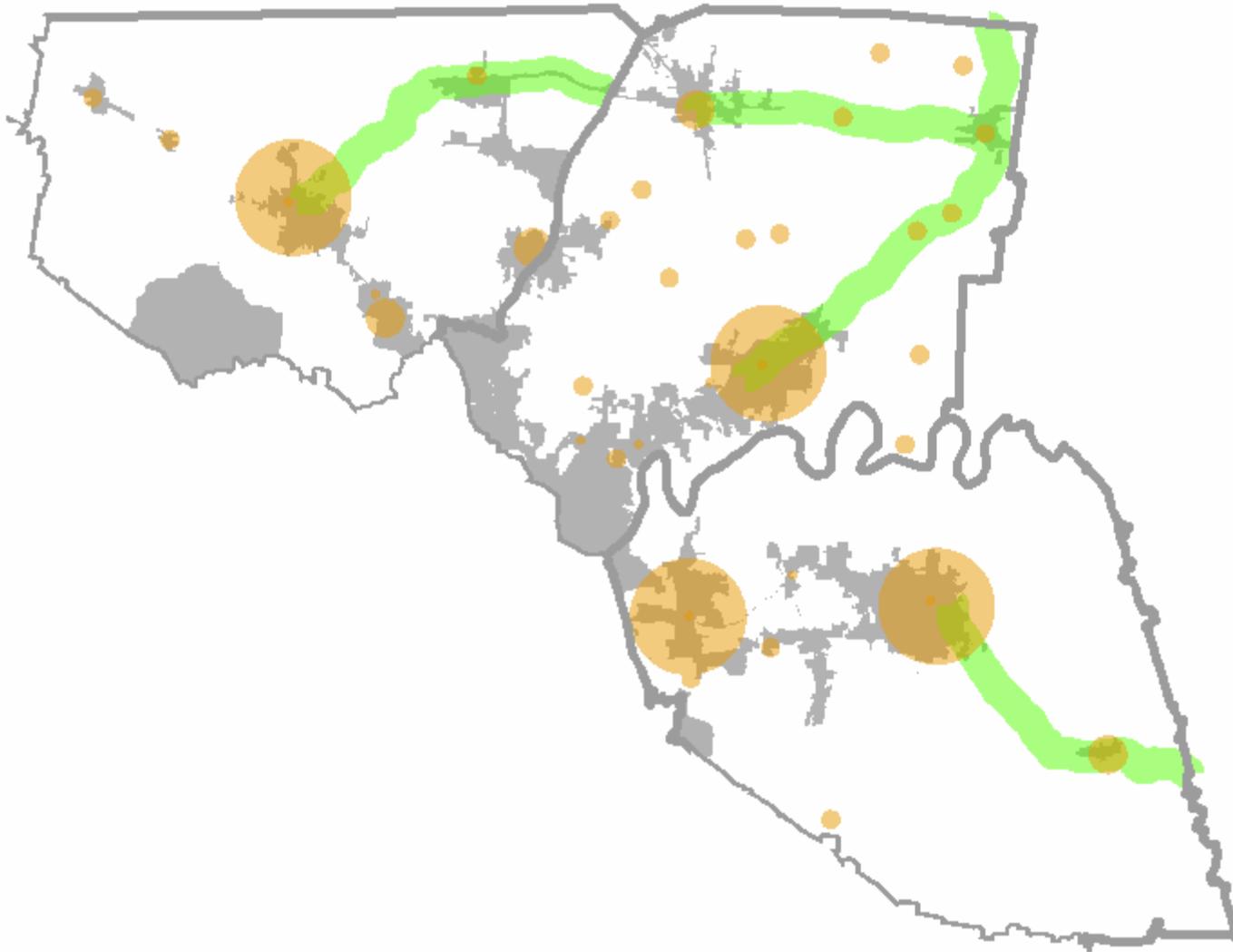
Special Use



Special Activity Centers



## (2) Centers: Preferred Growth Areas



# Alternative Tests – What If....

What if 80% of all new growth went within a preferred growth areas....

## HH Distribution

2008

2035 BAU

2035 ALT

### Robertson County

Centers & Corridors

58.55%

54.97%

67.78%

Centers

44.78%

40.29%

59.94%

### Sumner County

Centers & Corridors

40.42%

36.35%

55.82%

Centers

25.23%

22.53%

46.54%

### Wilson County

Centers & Corridors

52.16%

46.26%

65.63%

Centers

44.08%

37.34%

61.46%

### Tri-County Area

Centers & Corridors

47.75%

43.49%

61.68%

Centers

35.22%

31.31%

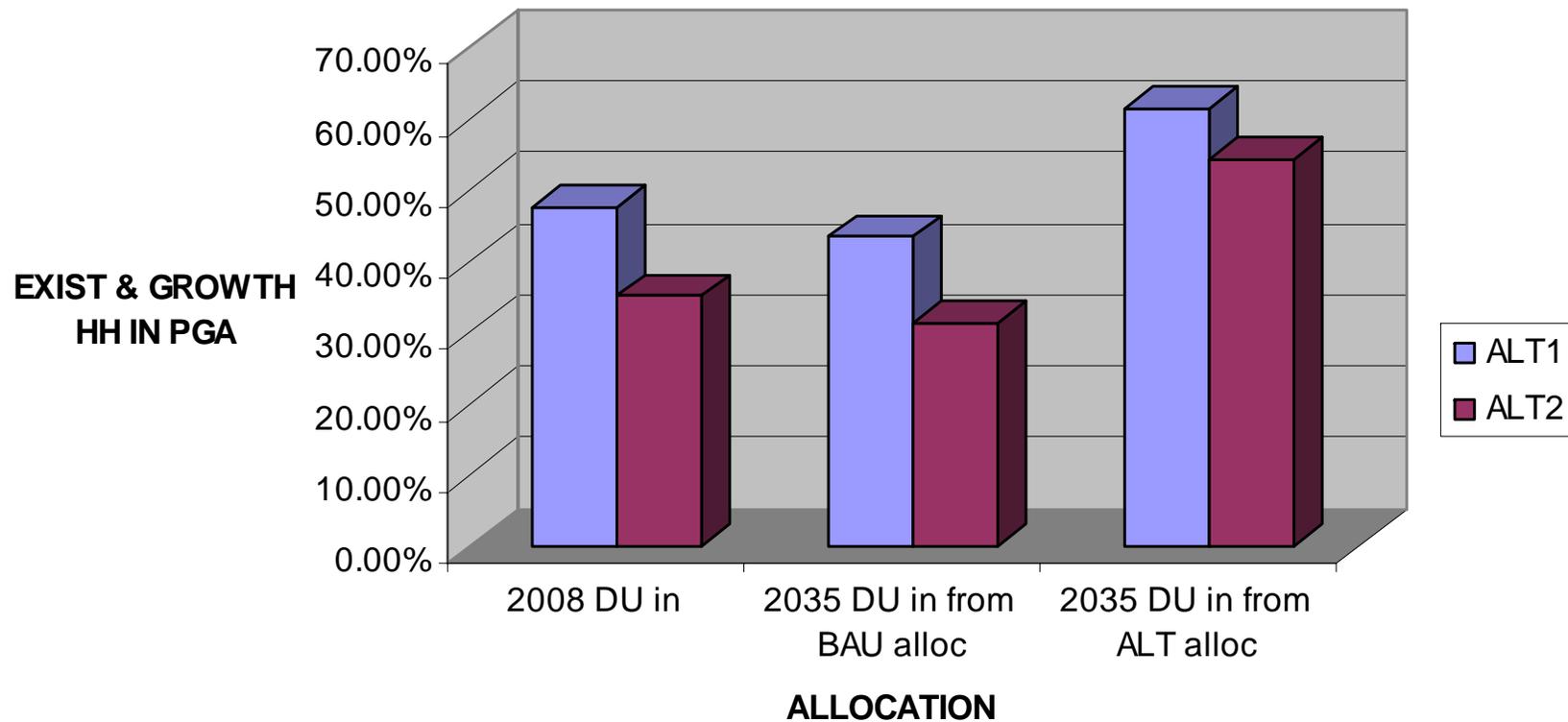
54.56%

# MOEs and Comparison of Alternatives

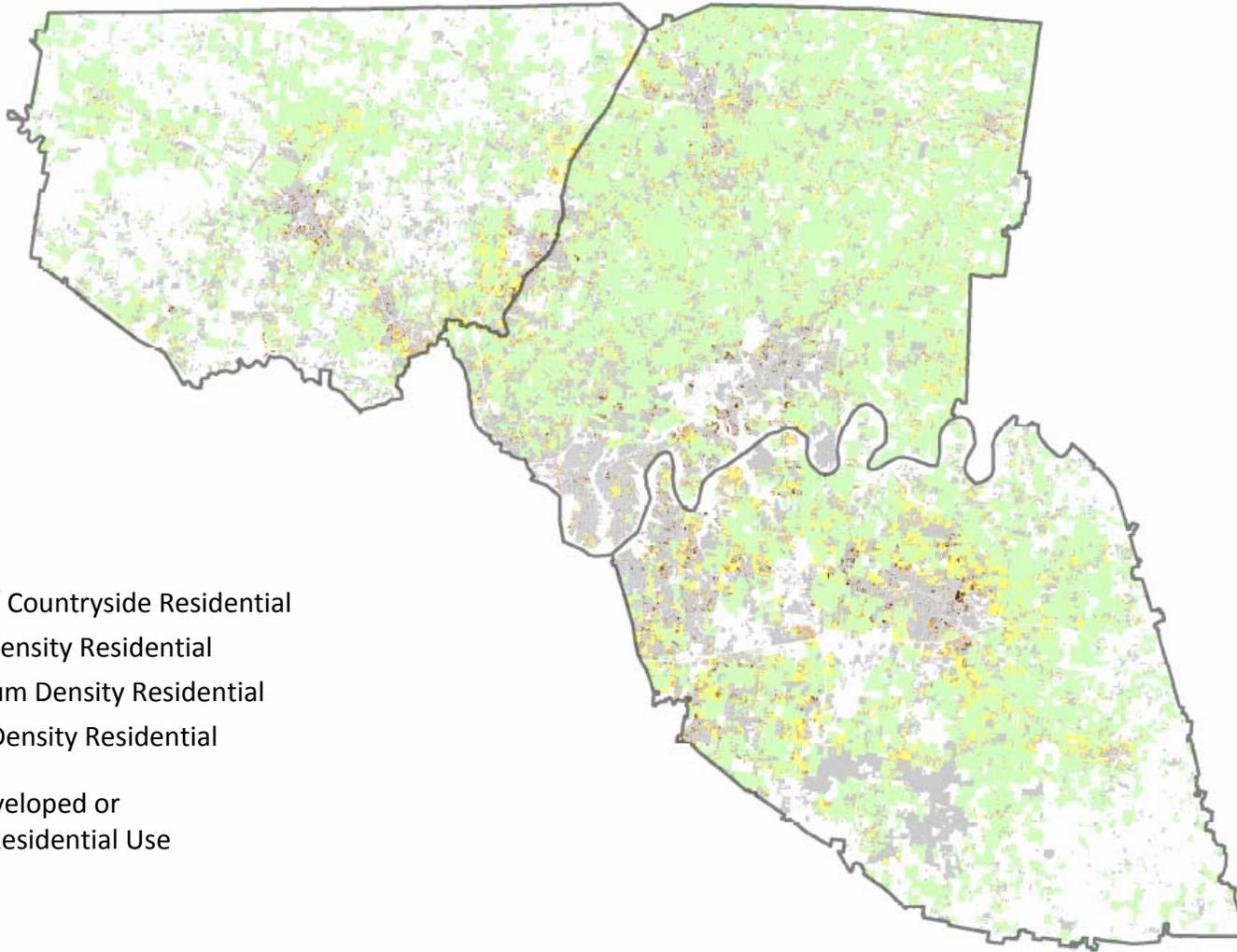
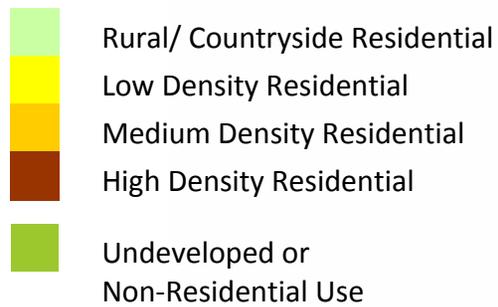


## % Households in Preferred Growth Area

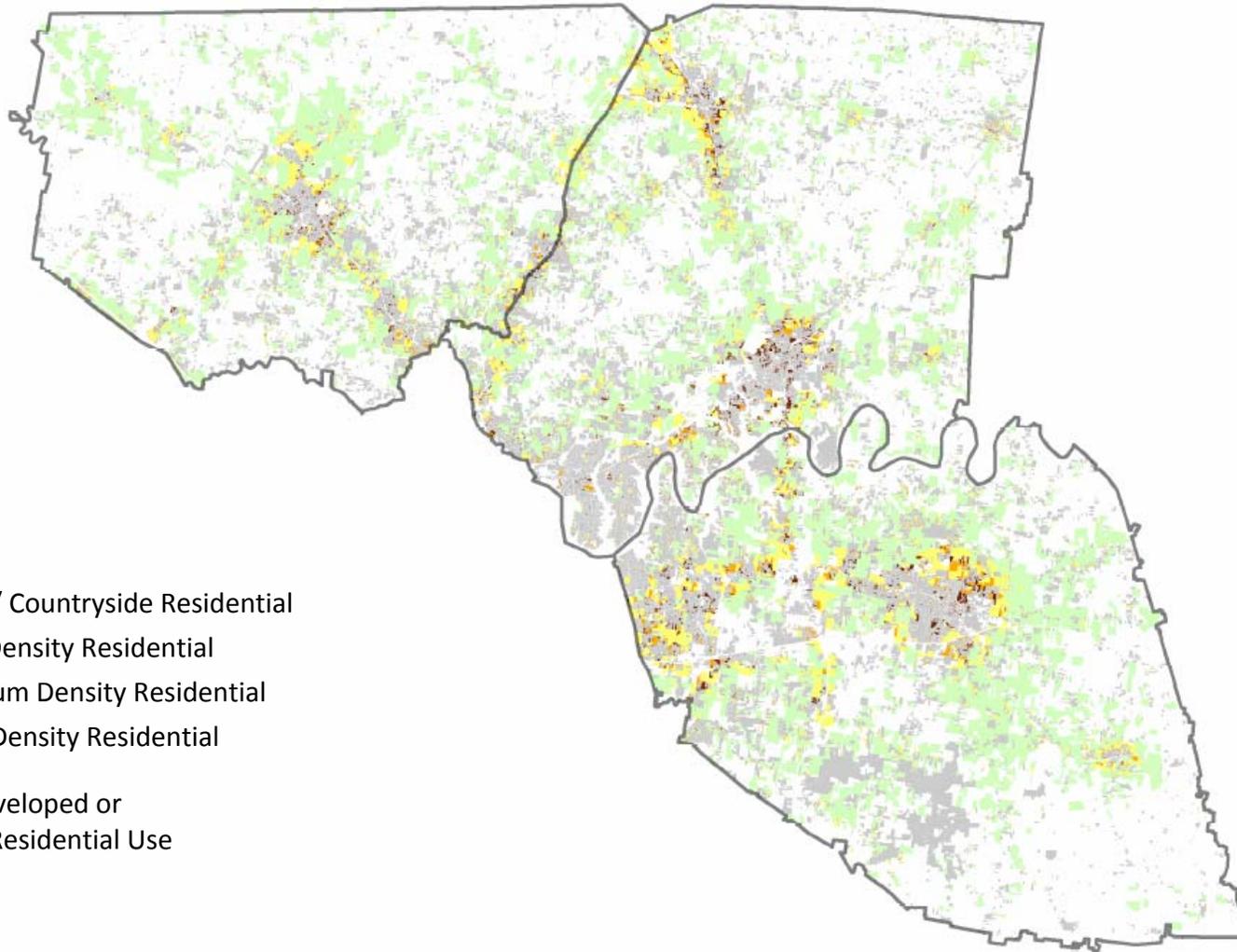
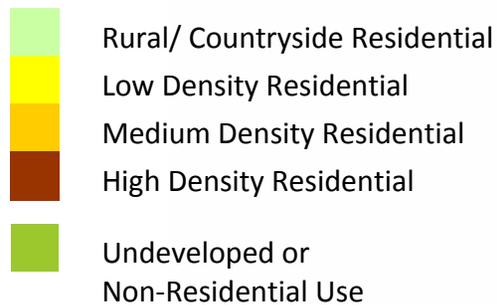
**TRI-COUNTY COMPARISON**



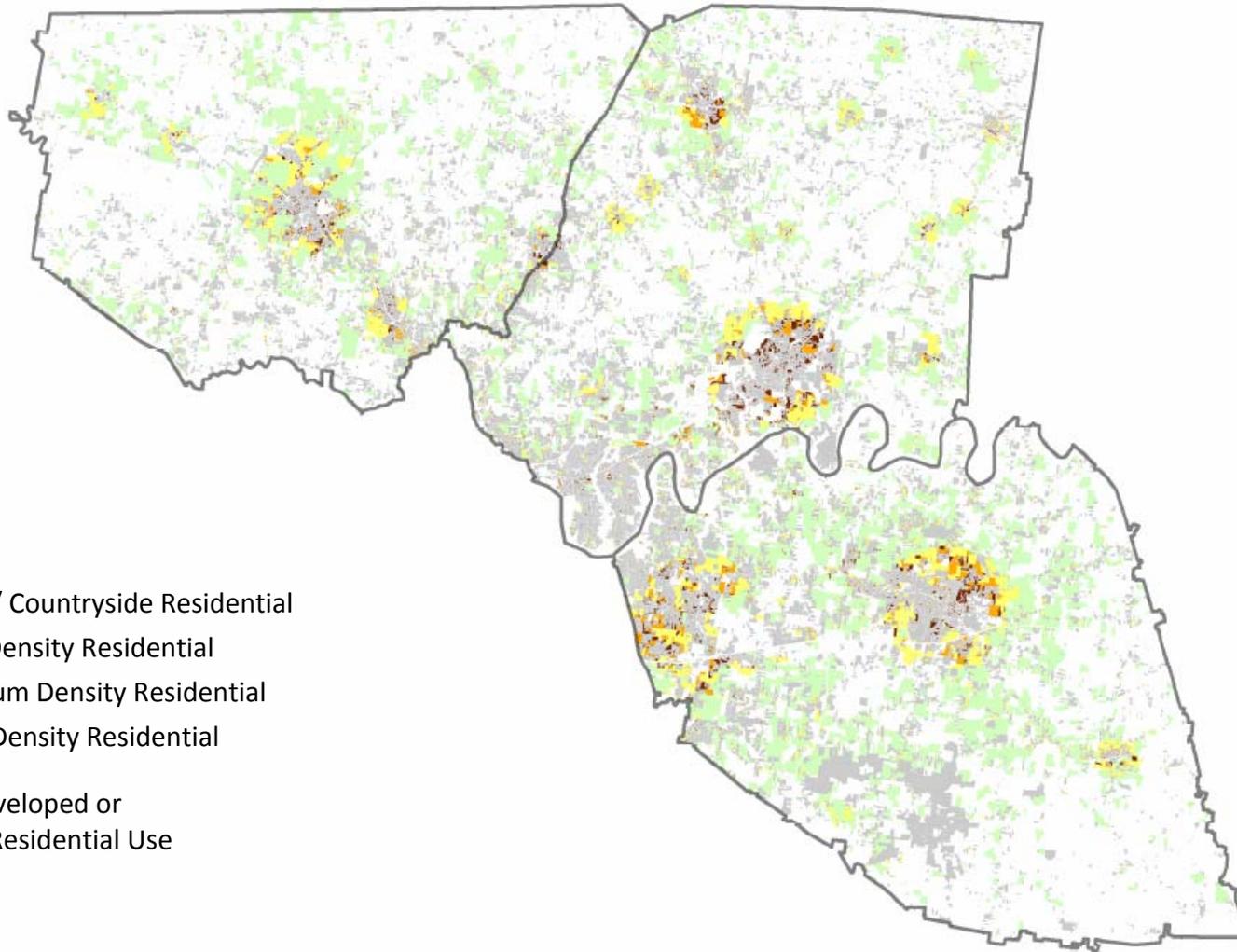
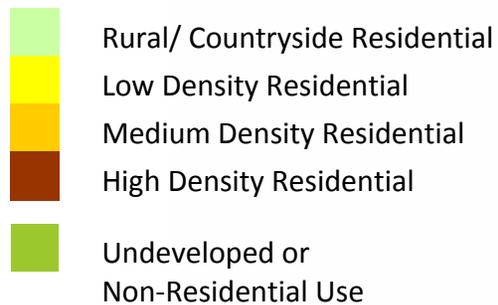
# Alternative Scenario 2: Centers

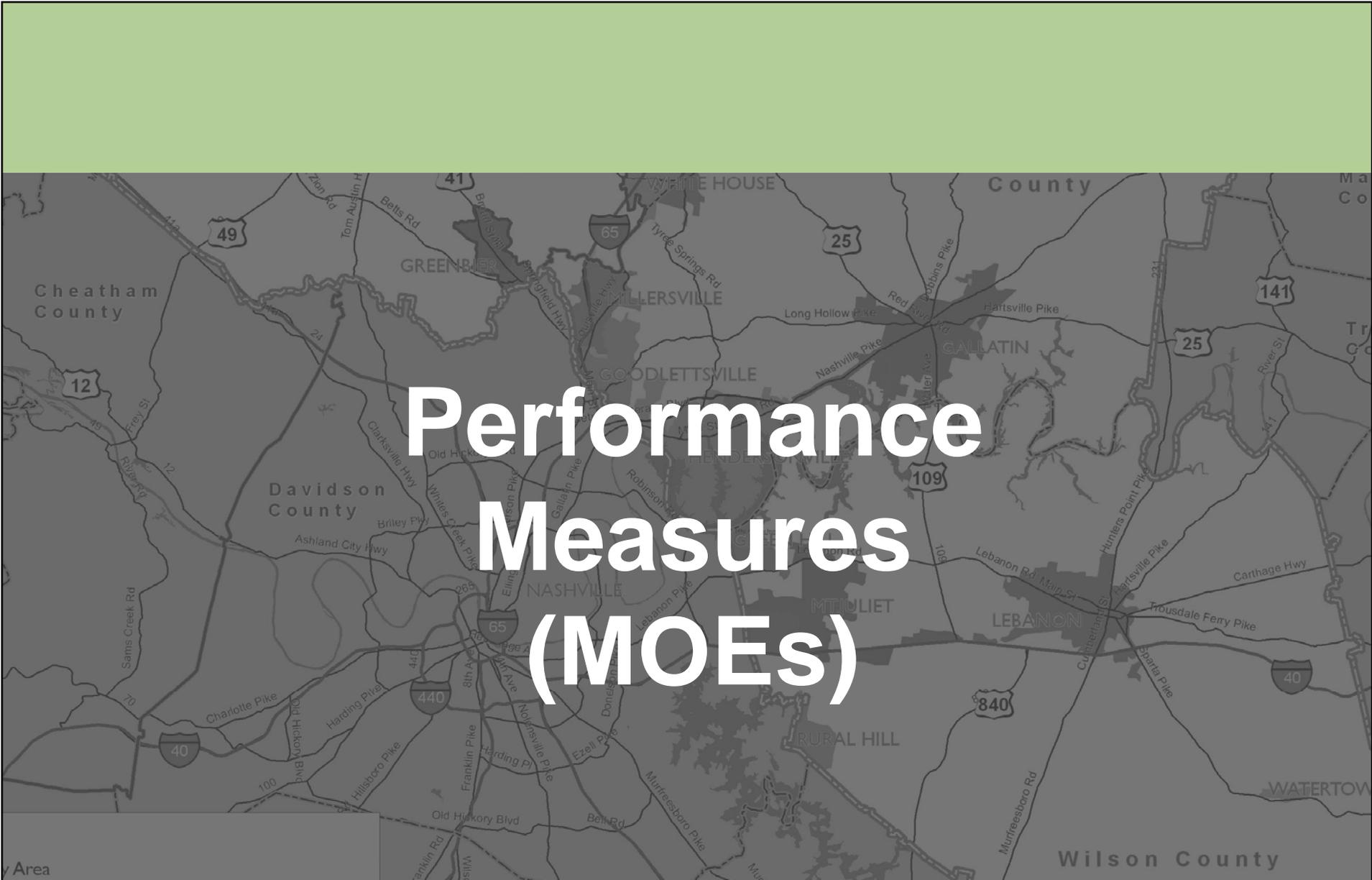


# 2035 Alternative 1 Residential Density



# 2035 Alternative 2 Residential Density





**Performance  
Measures  
(MOEs)**

The background is a grayscale map of Davidson County, Tennessee, and its surrounding areas. Major cities and towns labeled include White House, Greenbrier, Millersville, Goodlettsville, Nashville, Mt Juliet, Gallatin, Lebanon, and Rural Hill. Major highways shown include US-49, US-12, US-25, US-40, US-109, US-141, US-840, and I-40, I-65, I-440. The map also shows various local roads and geographical features like rivers and lakes. The text 'Performance Measures (MOEs)' is centered over the map in a large, white, sans-serif font.

# MOEs



- Measures of Effectiveness (MOEs)

- Based on regional goals

- Purpose

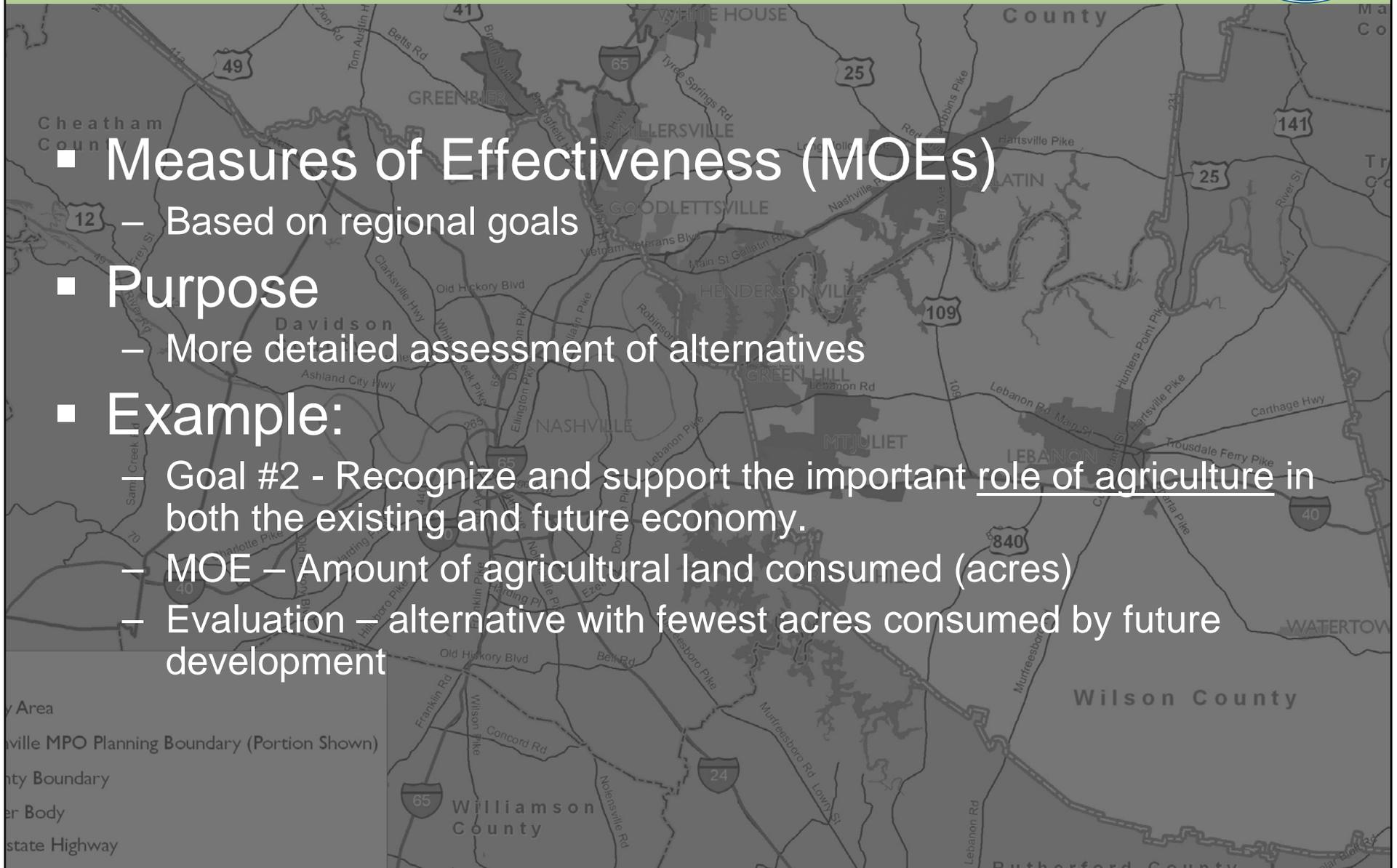
- More detailed assessment of alternatives

- Example:

- Goal #2 - Recognize and support the important role of agriculture in both the existing and future economy.

- MOE – Amount of agricultural land consumed (acres)

- Evaluation – alternative with fewest acres consumed by future development





# MOEs and Comparison of Alternatives

- Alternatives:

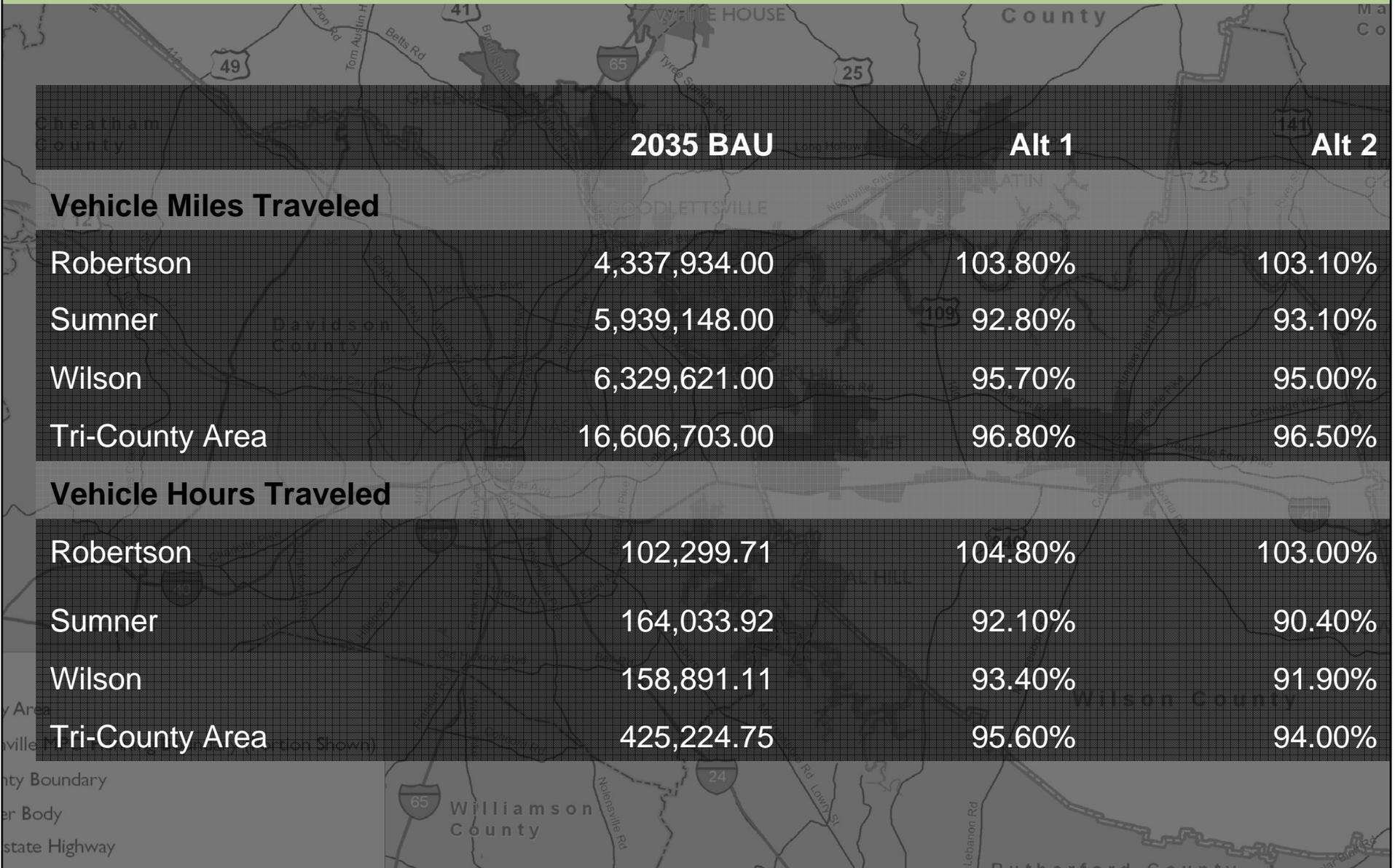
- BAU
- Alt 1 – Centers & Corridors
- Alt 2 – Centers

- Allocations of Growth:

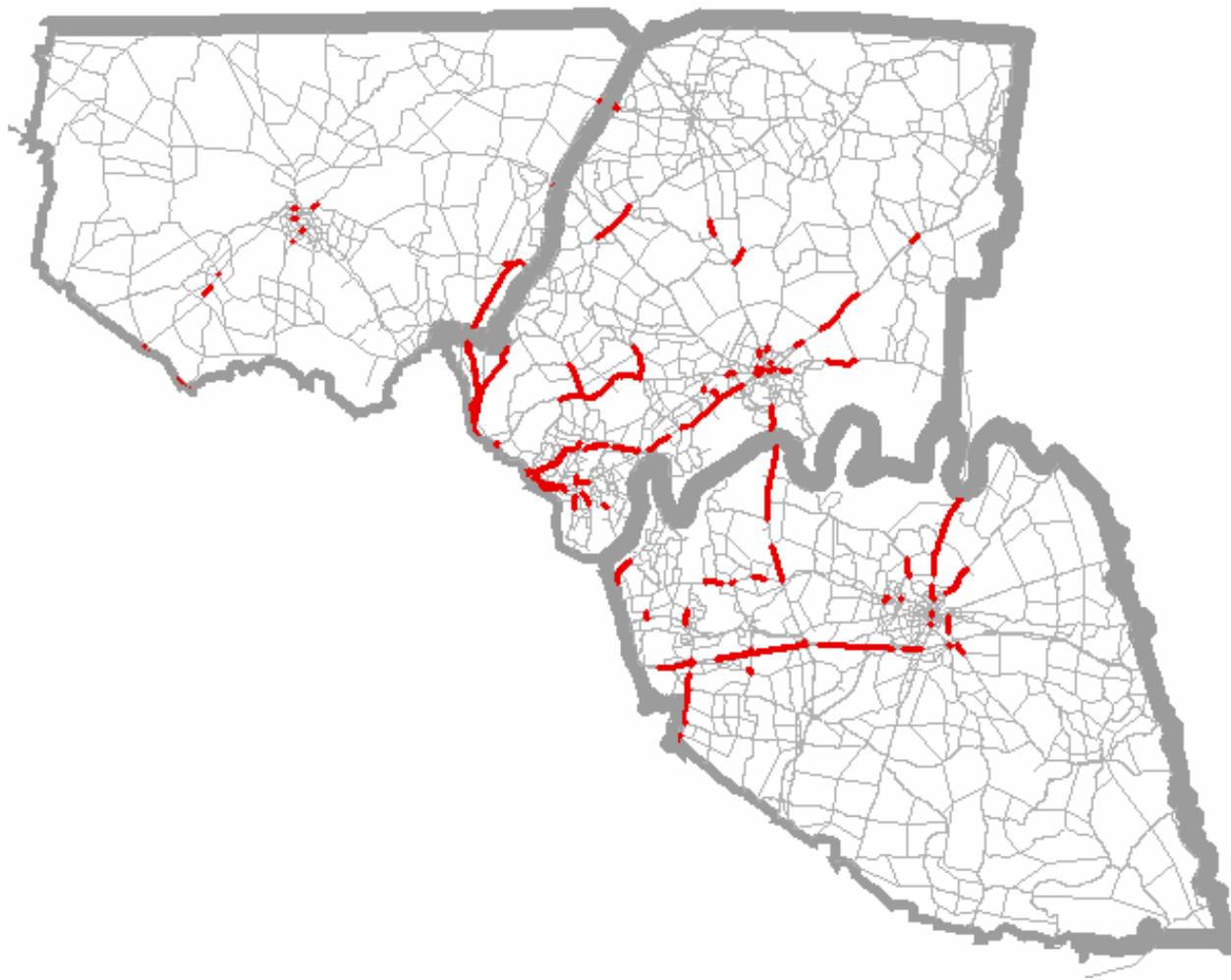
- BAU allocation
- Alternative allocation (80% directed toward Preferred Growth Area)



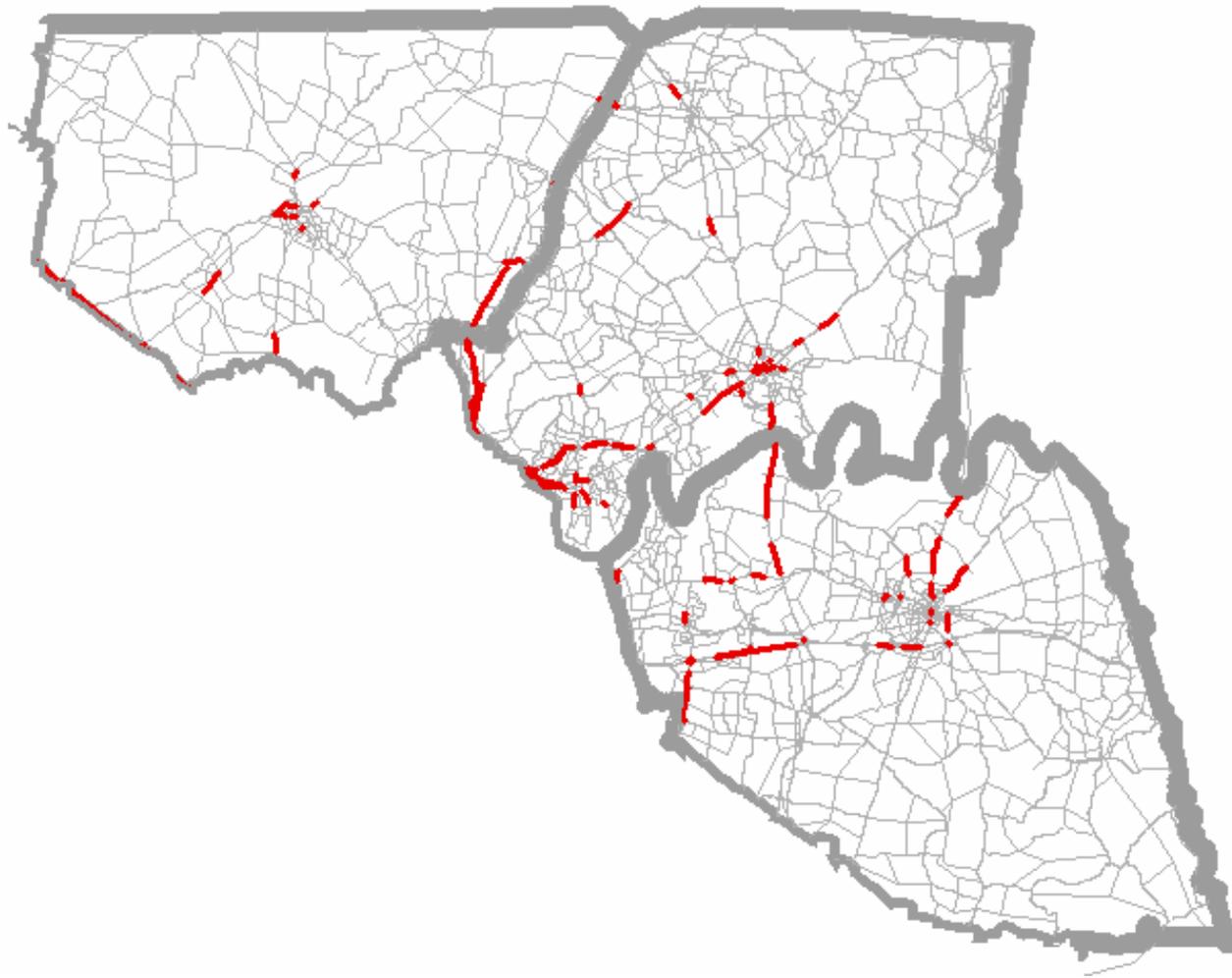
# Travel Demand Measures



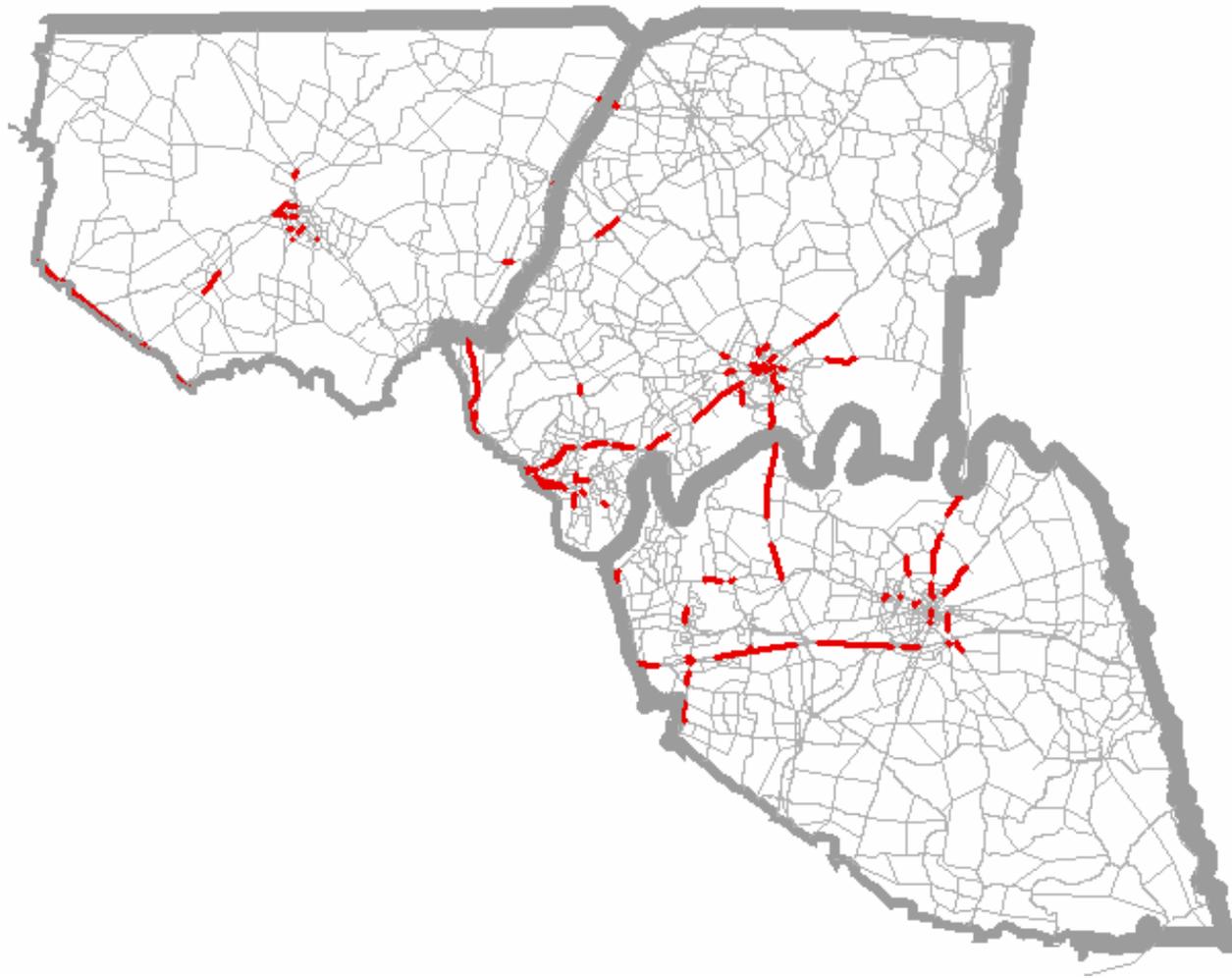
# BAU Scenario: 2035 Congestion



# (1) Centers & Corridors: 2035 Congestion



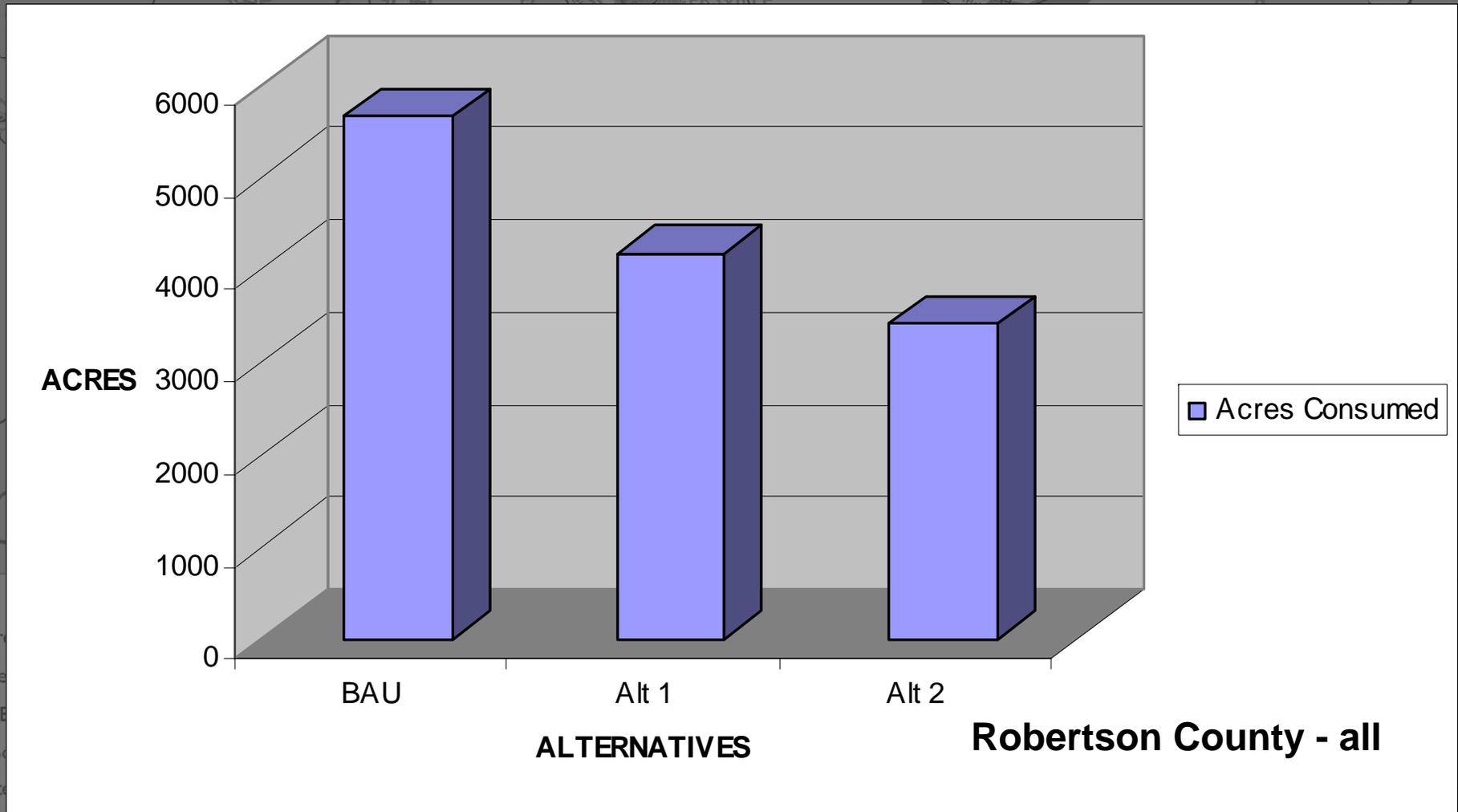
## (2) Centers: 2035 Congestion



# MOEs and Comparison of Alternatives



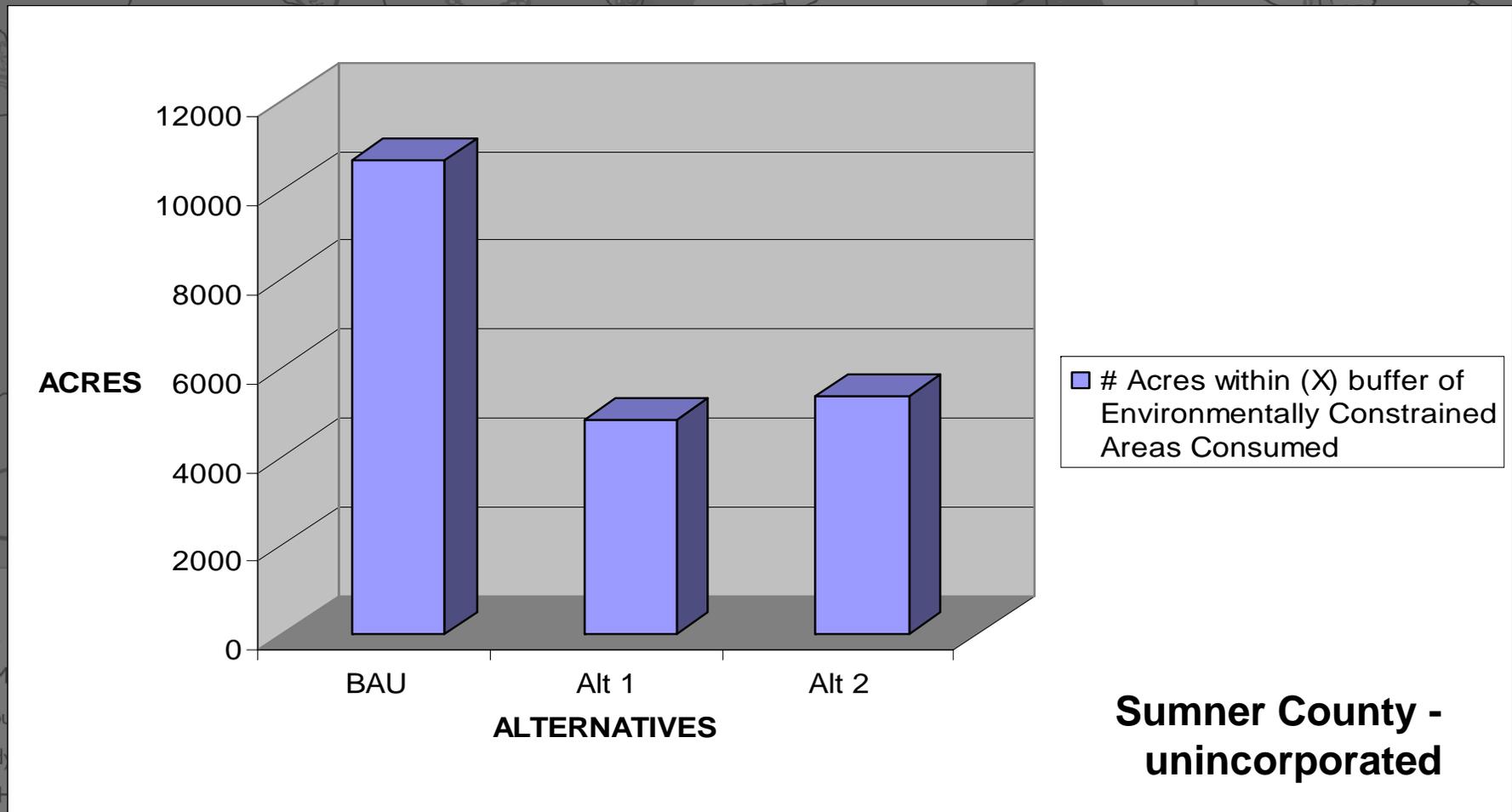
## # Acres within Prime Agr Consumed



# MOEs and Comparison of Alternatives



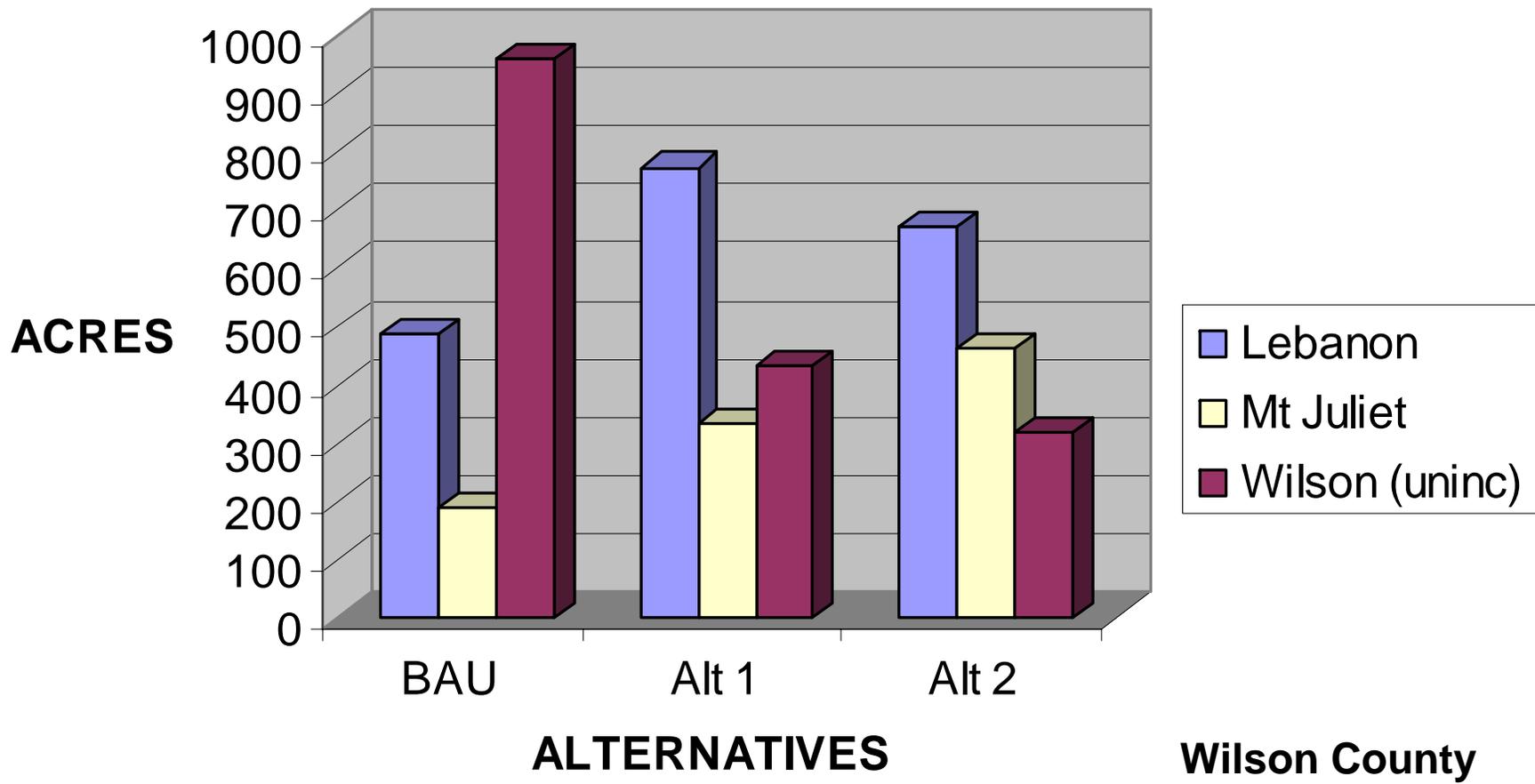
## # Acres within (X) buffer of Environmentally Constrained Areas Consumed



# MOEs and Comparison of Alternatives



## Additional Parkland (Acres) Required to Keep LOS

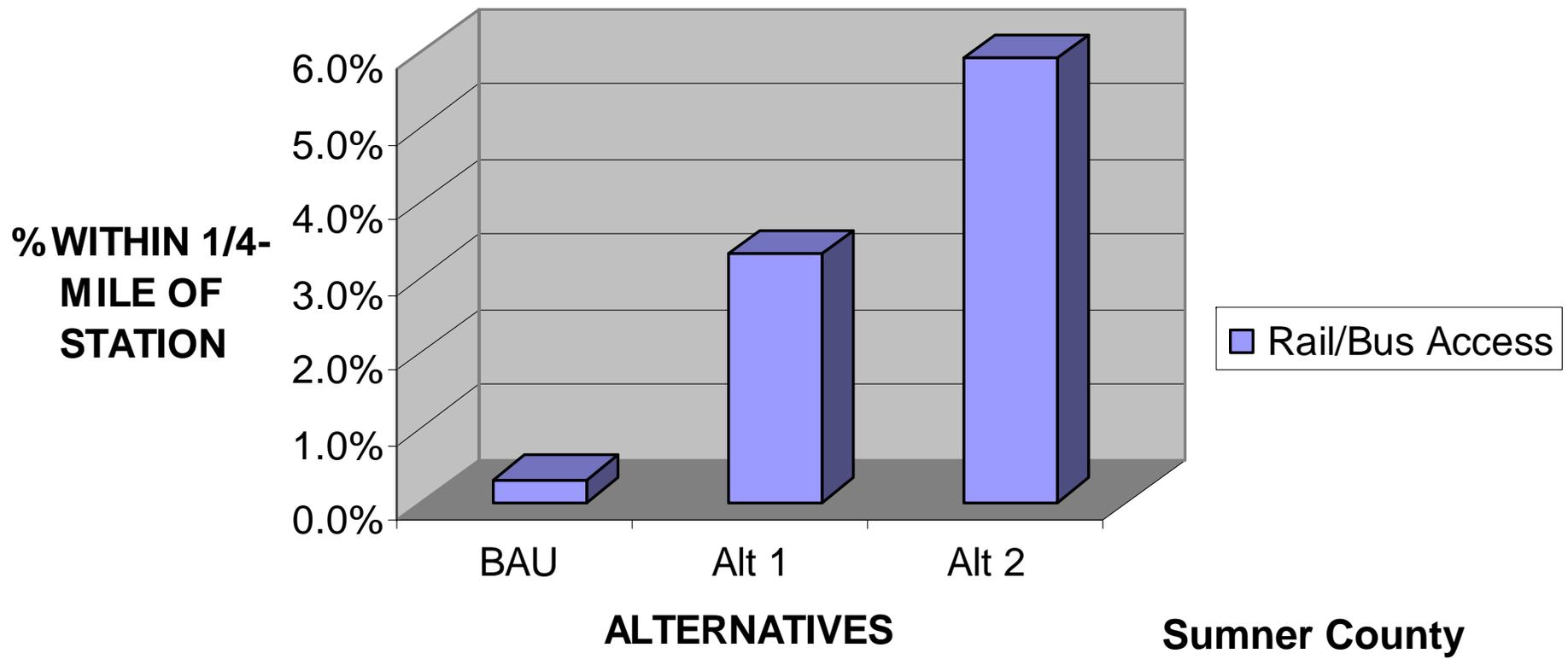


Wilson County

# MOEs and Comparison of Alternatives



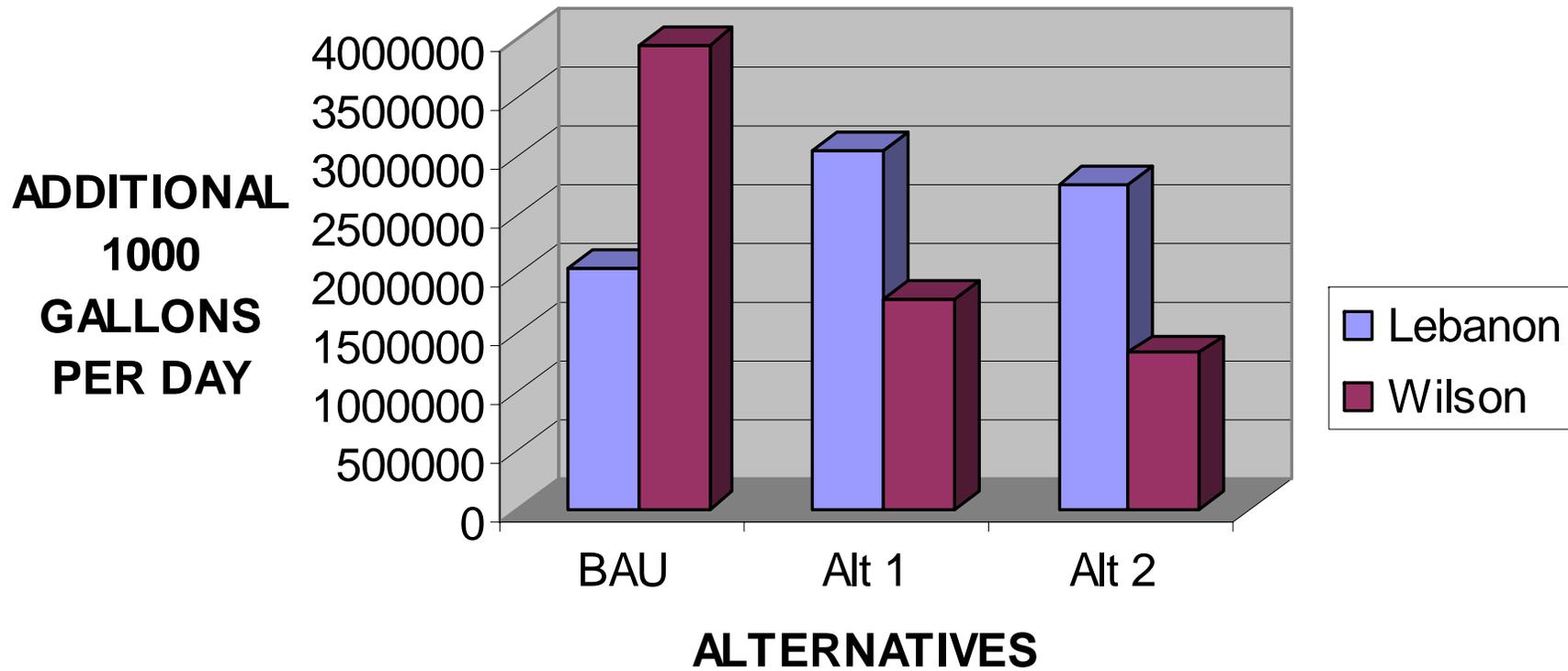
% of People (Pop & Emp) within 1/4 Mile of Transit Stations (Rail Stations & Express Bus Stops)



# MOEs and Comparison of Alternatives



## Sewer - Additional 1000 Gallons per Day Generated per Jurisdiction

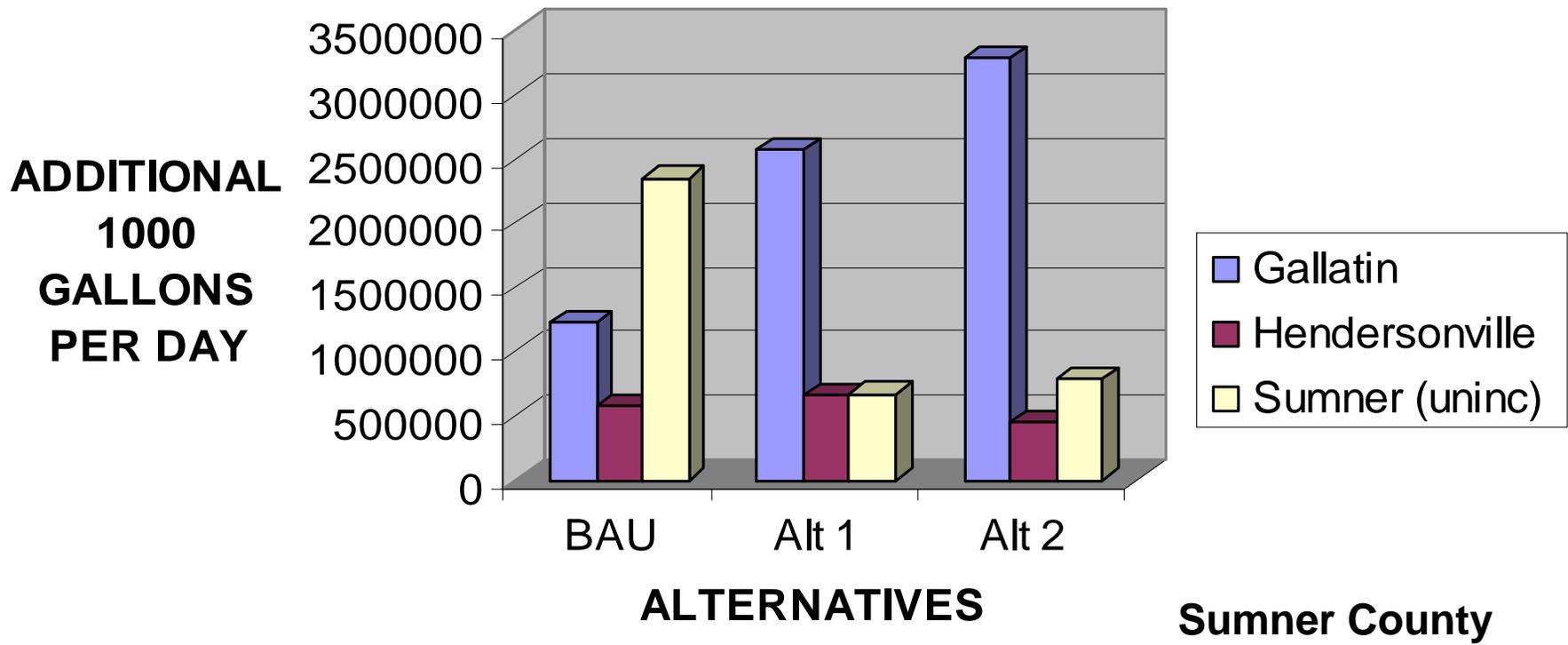


Wilson County

# MOEs and Comparison of Alternatives



## Water - Additional 1000 Gallons per Day Consumed by Jurisdiction

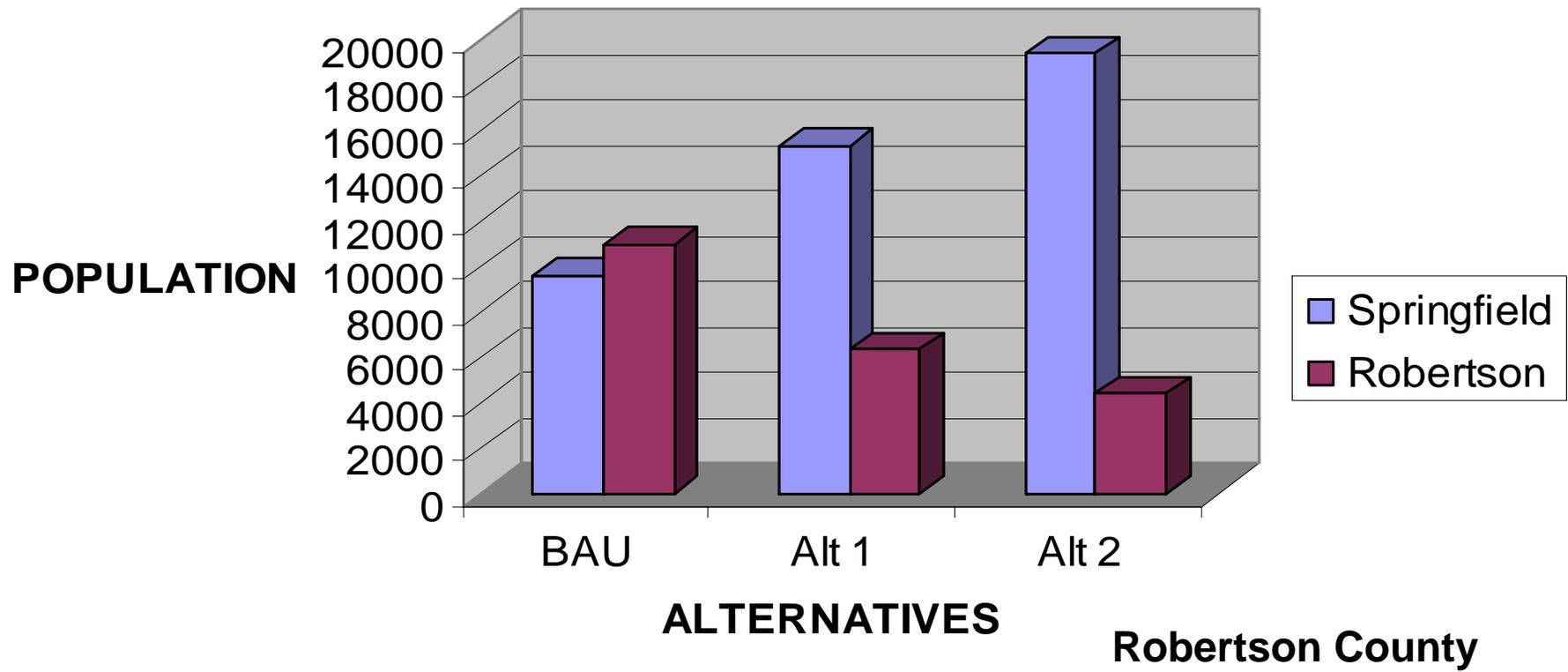


Sumner County

# MOEs and Comparison of Alternatives



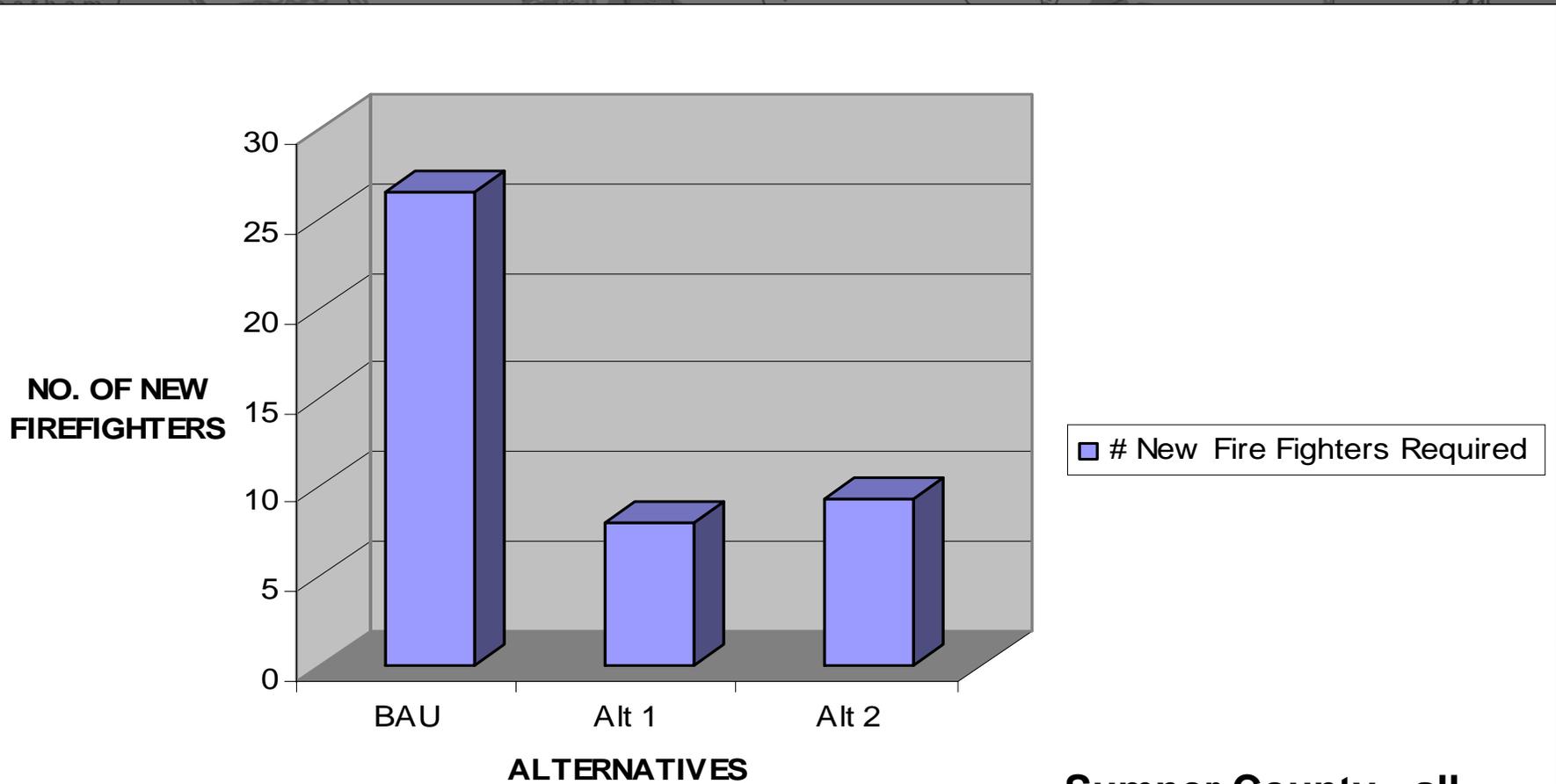
Schools - # of Residential Population within each of the Geographies (no school measure yet)



# MOEs and Comparison of Alternatives



## # New Fire Fighters Required to Maintain LOS

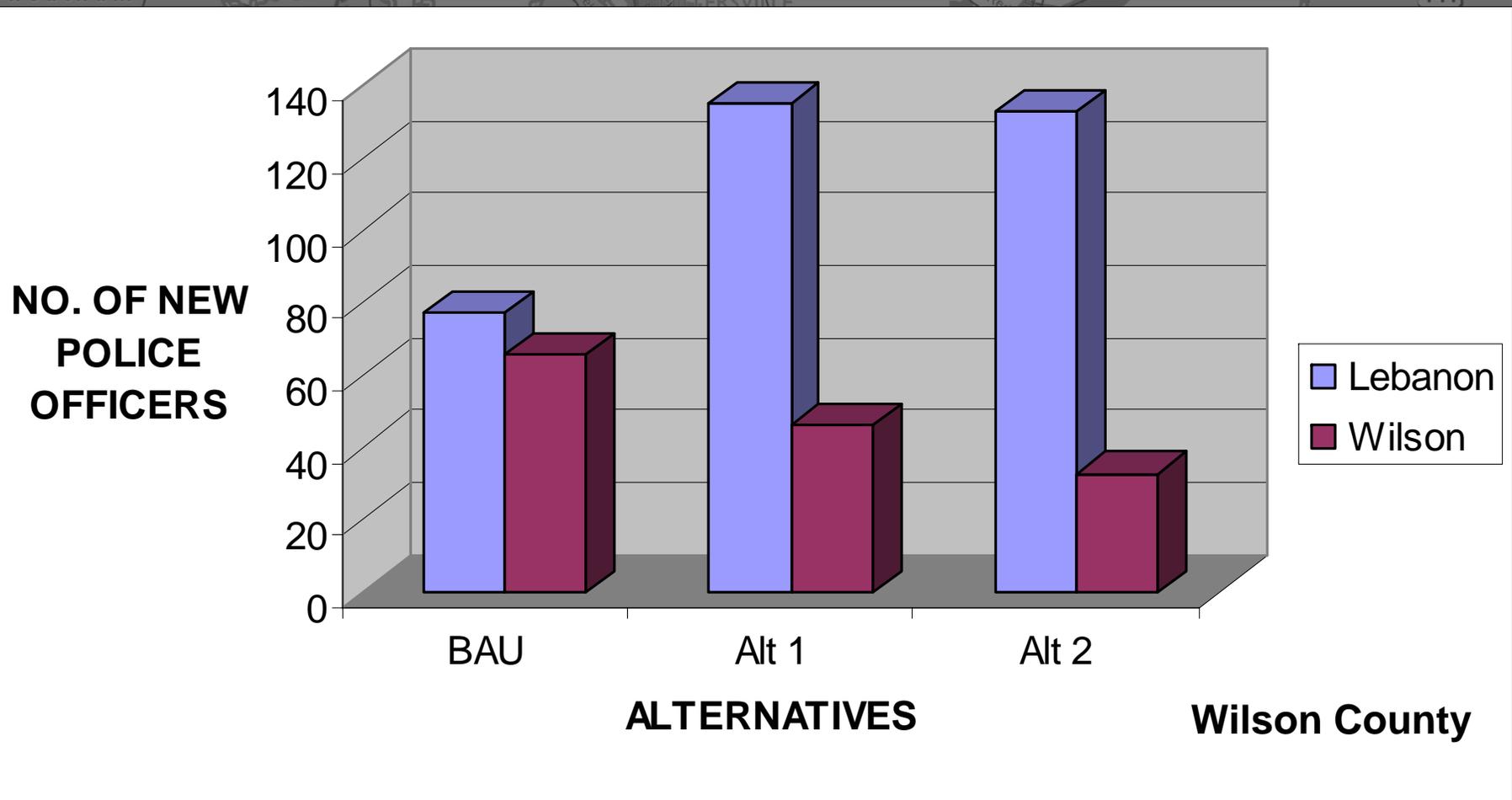


Sumner County - all

# MOEs and Comparison of Alternatives



## # New Police Officers Required to Maintain LOS

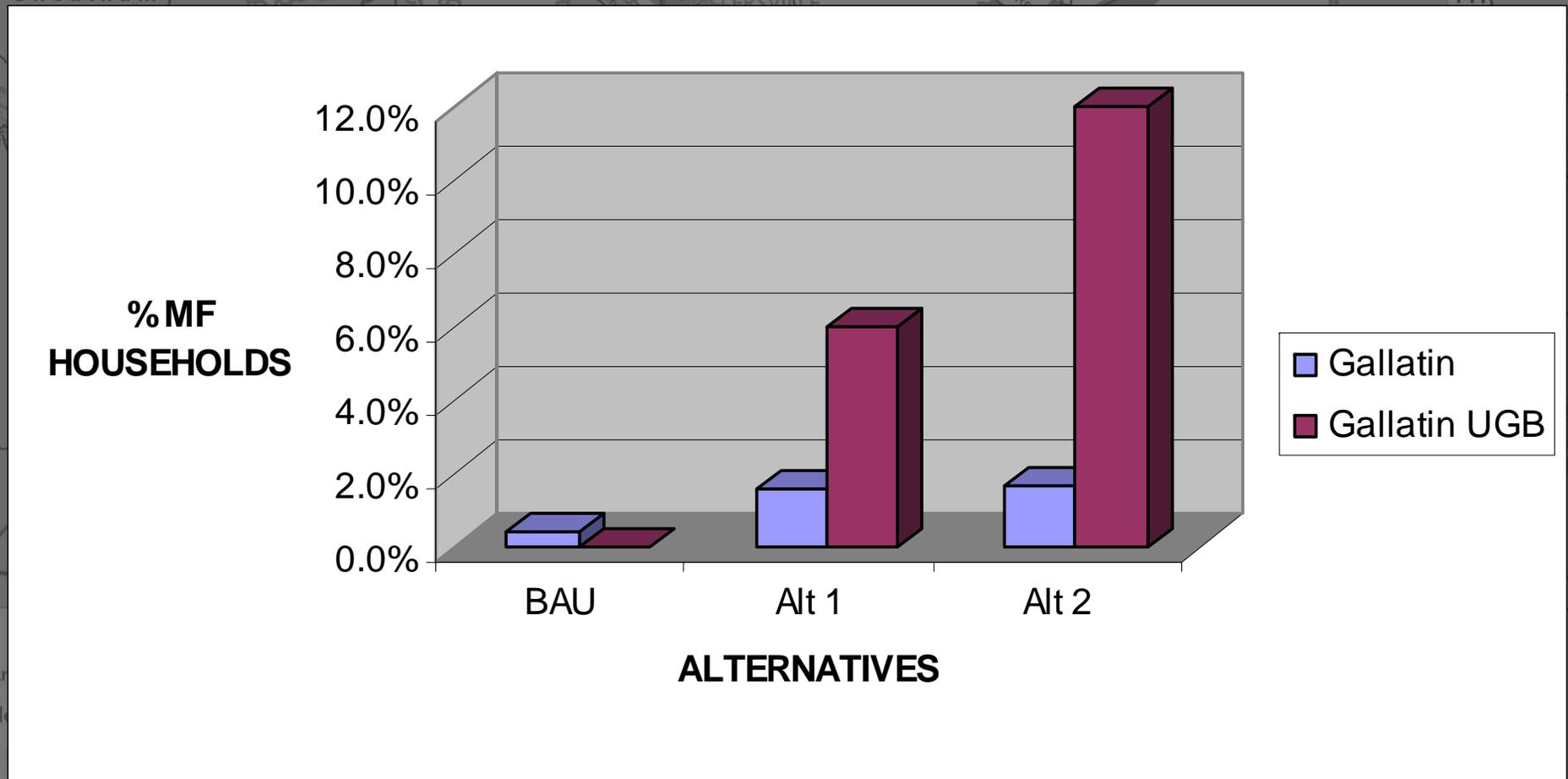


Wilson County

# MOEs and Comparison of Alternatives



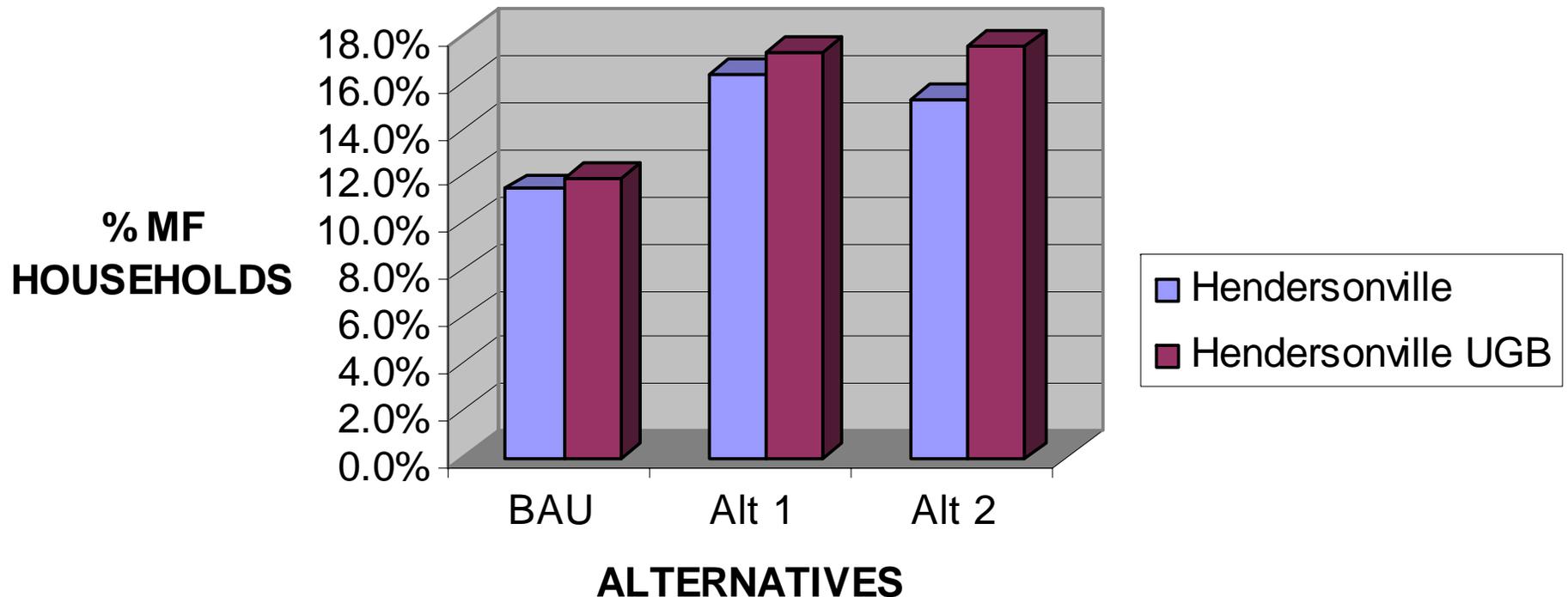
## % Multifamily Households in Preferred Growth Area



# MOEs and Comparison of Alternatives



## % Multifamily Households in Preferred Growth Area



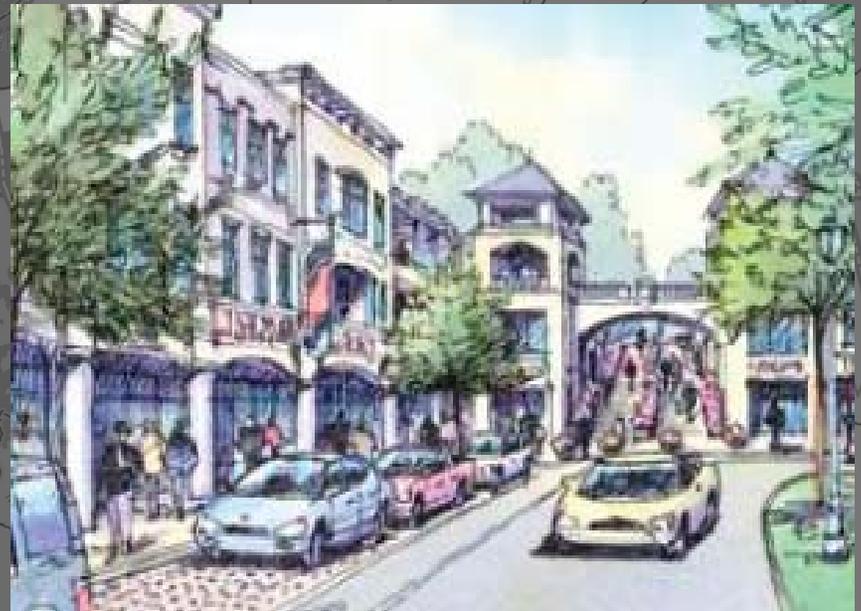
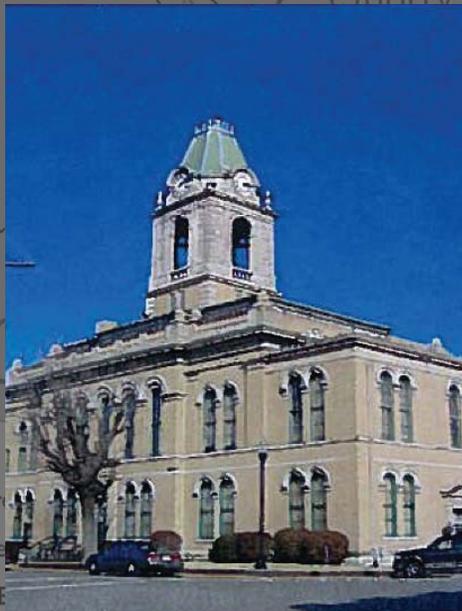
# Policy Implications



# Potential Policy Implications

## ■ Both Alternatives

- Encourage redevelopment and infill in Traditional Town Centers
- Reinforce existing centers by directing growth toward them
- Create new centers with higher densities (TOD) along primary corridors where transit stops are likely to occur



# Potential Policy Implications

- Both Alternatives

- Maintain areas identified as activity and employment centers, ensuring continued economic vibrancy
- Allow activity centers to expand modestly to accommodate demand while minimizing encroachment into neighboring areas



# Potential Policy Implications



## ■ Both Alternatives

- Protect Conservation areas to preserve valuable natural resources and maintain function of natural systems
- Discourage growth in rural areas where such areas

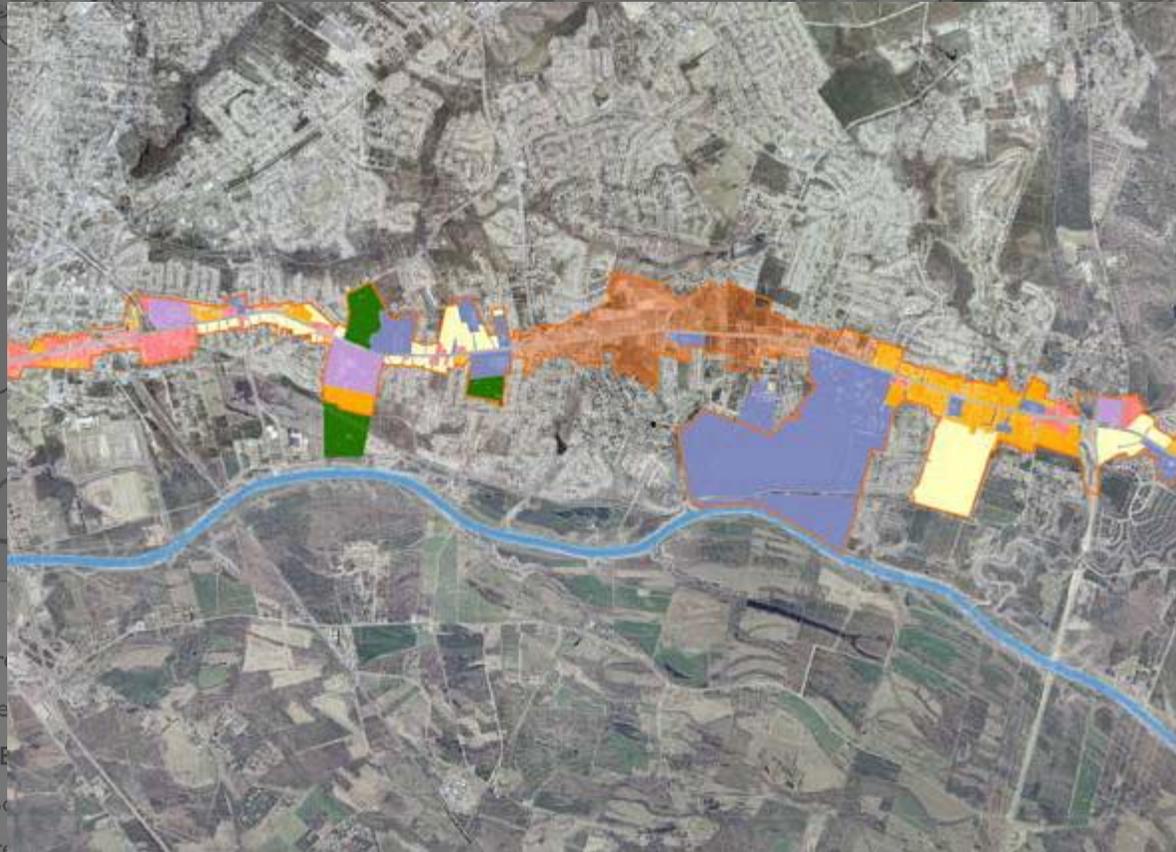




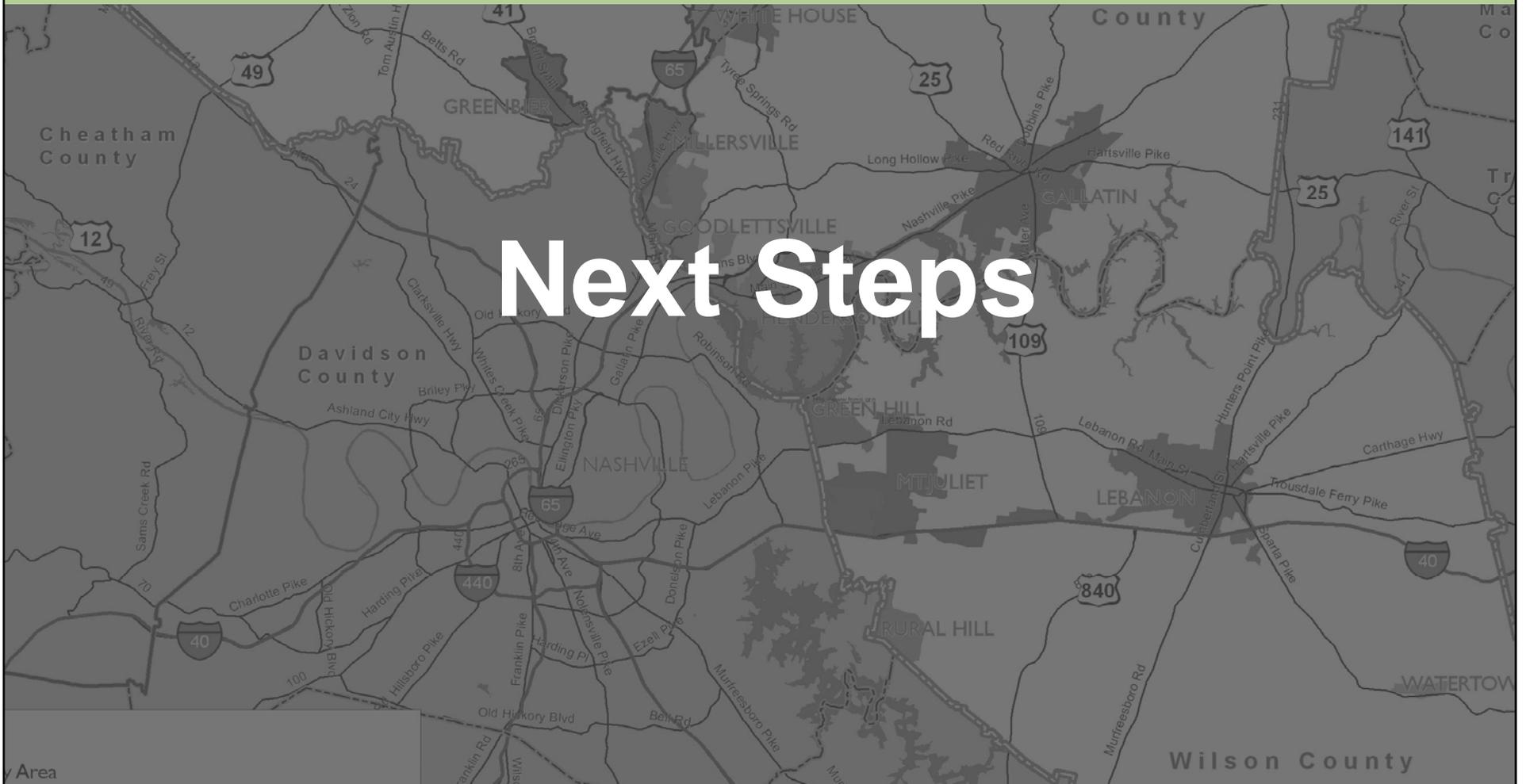
# Potential Policy Implications

## ■ Centers & Corridors

— Allow development along key transportation corridors, where access would support additional growth



# Next Steps





# Preferred Growth Scenario

- Evaluate based on MOEs
  - Are there benefits in each?
- Solicit feedback at community workshops
- Conduct work session with Steering Committee to develop “preferred”





# Focus Areas and Strategic Corridors

Based on Preferred Scenario...

- Policies and implementation strategies to consider
- Focus Areas (4)
  - 4 conceptual plans
  - Different character areas
  - Different policies



y Area  
ville MPO Planning Boundary (Portion Shown)  
nty Boundary  
er Body  
state Highway

Williamson County



# Focus Areas and Strategic Corridors

Based on Preferred Scenario...

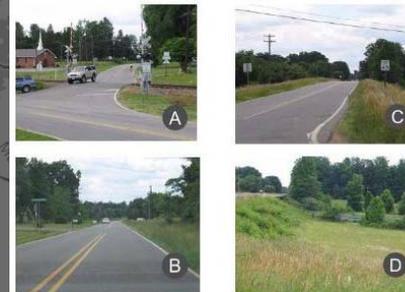
- Strategic Corridors (10 one-mile segments)
  - Represent critical areas of concern and/or locations where changes in land use intensity or traffic appears eminent
  - Variety: cross-sections, land use contexts, geography



### Corridor Recommendations

Number of lanes	6
Median	Divided
2030 Daily Volume	
2030 Daily Capacity	

### Proposed Cross Section

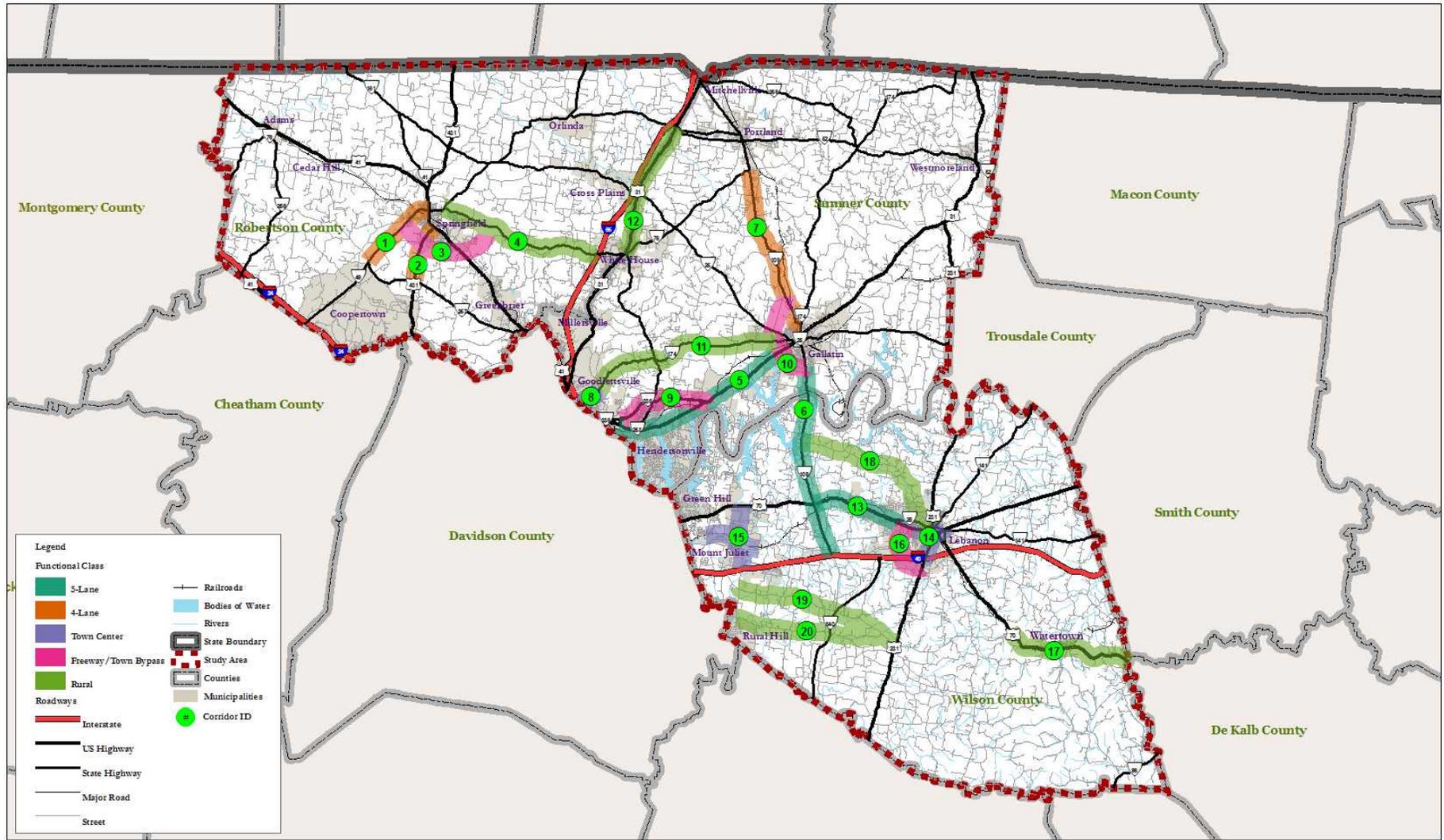


### Corridor Description and Issues Identified

- Two-lane cross section
- New diamond interchange with I-77 (TIP I-4411) to be let on November 2006
- Signal will be constructed at NC 115 and Langtree Road (2007)
- Proposed development is expected to cause congestion on this corridor
- See Mt. Mourne area plan

*Data to KHA to begin field work*  
*Field work scheduled for Dec 1-3*  
*Report end of December*

# Strategic Corridors



**Legend**

3-Lane	Railroads
4-Lane	Bodies of Water
Town Center	Rivers
Freeway/Town Bypass	State Boundary
Rural	Study Area
Roadways	Counties
Interstate	Municipalities
US Highway	Corridor ID
State Highway	
Major Road	
Street	

CANDIDATE COMMUNITY STRATEGIC CORRIDORS  
 Tri-County Transportation Plan and Land Use Study  
 Tennessee



July 2008 | LO110796

**DRAFT**



Land Design  
 300 North College St  
 Columbia, TN 38401  
 Phone: (615) 252-0300  
 Fax: (615) 252-0301  
 Web: www.landdesign.com



# Upcoming Meetings

- **Community Workshops (3) – 5:00-7:00 PM**
  - Dec 3 – Sumner
  - Dec 7 – Robertson
  - Dec 8 – Wilson
- **Open House – 11:00 AM-1:00 PM**
  - Dec 8 – Nashville
- **Steering Committee – Work Session**
  - Dec 15.....???

Map Legend:  
- MPO Planning Boundary (Portion Shown)  
- County Boundary  
- Water Body  
- State Highway

